



Name: Benayahu Bar-Yosef, Ph.D. (Retiree)

Units: Soil, Water and Environmental Sciences, Soil Chemistry, Plant Nutrition and Microbiology

Research Interests / Job description

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Research scientist (emeritus)

Research Interests / Job description

Senior soil scientist (retired).

Soil chemistry- Adsorption; surface reaction models; rhizospheric chemistry; ions transport; nutrients transformations in soil.

Plant nutrition- modeling uptake and root growth in response to environmental conditions; root excretions; fertigation principles; crops objective nutrient consumption curves.

Greenhouse crop production- soilless culture; modeling crop response to solution recycling; developing expert systems for optimal operation of open and semi-closed greenhouse fertigation systems.

Inorganic and organic phosphorus- reactions and transformations in soil; availability to plants; environmental concerns stemming from manure, sludge and reclaimed wastewater soil application.

CV

List of publications - Benayahu Bar-Yosef

Articles in reviewed journals

I. Lahav, N., Y. Chen, **B. Bar-Yosef** (1968) Clay suspensions in a drying-out process. Soil Sci. 106: 297-302.

2. **Bar-Yosef, B.**, U. Kafkafi, N. Lahav (1969) Relationships among adsorbed phosphate, silica and hydroxyl during drying out and rewetting of kaolinite suspensions. *Soil Sci. Soc. Am. Proc.* 33: 672-677.
3. **Bar-Yosef, B.** (1971) Fluxes of P and Ca into intact corn roots and their dependence on solution concentration and root age. *Pl. Soil* 35: 589-600.
4. **Bar-Yosef, B.**, U. Kafkafi, and E. Bresler (1972) Uptake of phosphorus by plants growing under field conditions: Theoretical model and experimental determination of its parameters. *Soil Sci. Soc. Am. Proc.* 36: 783-788.
5. **Bar-Yosef, B.**, B. Bresler and U. Kafkafi (1972) Uptake of phosphorus by plants growing under field conditions: II. computed and experimental results for corn plants. *Soil Sci. Soc. Am. Proc.* 36: 780-794.
6. **Bar-Yosef, B.** and U. Kafkafi (1972) Rates of growth and nutrient uptake of irrigated corn as affected by N and P fertilization. *Soil Sci. Soc. Am. Proc.* 36: 931-936.
7. **Bar-Yosef, B.**, A.M. Posner, J.P. Quirk (1975) Zinc adsorption and diffusion in goethite. *J. Soil Sci.* 26: 1-21.
8. **Bar-Yosef, B.** and M.R. Sheikolslami (1976) Distribution of water and ions in soils irrigated and fertilized from a trickler source. *Soil Sci. Soc. Am. J.* 40: 575-582.
9. **Bar-Yosef, B.** (1977) Trickle irrigation and fertilization of tomatoes in sand dunes: water, N and P distribution in the soil and uptake by plants. *Agron. J.* 69: 486-491.
10. **Bar-Yosef, B.** and B. Akiri (1978) Sodium bicarbonate extraction to estimate N, P, K availability in soils. *Soil Sci. Soc. Am. J.* 42: 319-323.
11. Kafkafi, U., **B. Bar-Yosef** and Aviva Hadas (1978) Fertilization decision model ? a synthesis of soil and plant parameters in a computerized program. *Soil Sci.* 125: 261-268.
12. **Bar-Yosef, B.** and U. Kafkafi (1978) Phosphate desorption from kaolinite suspensions. *Soil Sci. Soc. Am. J.* 42: 570-574.
13. **Bar-Yosef, B.** (1979) pH-dependent zinc adsorption by soils. *Soil Sci. Soc. Am. J.* 43: 1095-1099.
14. **Bar-Yosef, B.**, Claire Stammers and B. Sagiv (1980) Growth of trickle irrigated tomato as related to rooting volume and uptake of N and water. *Agron. J.* 72: 815-822.
15. **Bar-Yosef, B.**, S. Fishman and H. Talpaz (1980) A model of Zn movement to single roots in soil. *Soil Sci. Soc. Am. J.* 45: 930-935.
16. Kafkafi, U. and **B. Bar-Yosef** (1980) Trickle irrigation and fertilization of tomatoes in highly calcareous soils. *Agron. J.* 72: 893-897.
17. **Bar-Yosef, B.** and J.R. Lambert (1981) Corn and cotton root growth in response to soil impedance and water potential. *Soil Sci. Soc. Am. J.* 45: 930-935.
18. Keren, R., G. Gast and **B. Bar-Yosef** (1981) pH dependent boron adsorption by Na-montmorillonite. *Soil Sci. Soc. Am. J.* 45: 45-48.
19. Fine, P., H. Talpaz and **B. Bar-Yosef** (1981) On the estimation of N mineralization parameters in incubation experiments. *Soil Sci. Soc. Am. J.* 45: 993-996.

20. Asher, L.E. and **B. Bar-Yosef** (1981) Effect of pyrophosphate, EDTA and DTPA on Zn adsorption by montmorillonite. *Soil Sci. Soc. Am. J.* 46: 271-276.
21. **Bar-Yosef, B.** and B. Sagiv (1982) Response of tomato plants to N and water applied via a trickle irrigation system: I. Nitrogen. *Agron. J.* 74: 633-639.
22. **Bar-Yosef, B.** and B. Sagiv (1982) Response of tomato plants to N and water applied via a trickle irrigation system: II. Water. *Agron. J.* 74: 637-639.
23. **Bar-Yosef, B.**, J.R. Lambert and D.N. Baker (1982) RHIZOS: a simulation of root growth and soil processes: Sensitivity analysis and validation for cotton. *Trans. ASAE* 25: 1268-1273.
24. Aloni, B., **B. Bar-Yosef, B.** Sagiv and E. Pressman (1983) The effect of nutrient solution composition and transient nutrients starvation on the yield and petiole pithiness in celery plants. *J. Hort. Sci.* 58: 91-96.
25. Schwartz, S. and **B. Bar-Yosef** (1983) Magnesium uptake by tomato plants as affected by Mg and Ca concentration in solution culture and plant age. *Agron. J.* 75: 267-272.
26. **Bar-Yosef, B.** and L.E. Asher (1983) Reaction of pyrophosphate in soils and its effect on zinc sorption at various pH levels. *Soil Sci.* 136: 82-88.
27. Krikun, J., J.H. Haas and **B. Bar-Yosef** (1983) The role of mycorrhiza in phosphorus uptake and plant growth. *Phytoparasitica* 11: 228-229.
28. Albasel, N and **B. Bar-Yosef** (1984) Effect of N solution concentration, water rate and transient starvation on sweet paprika dry matter production and yield. *J. Plant Nutrition* 7: 1005-1018.
29. Hadas, Aviva and **B. Bar-Yosef** (1984) Effect of pelleting, temperature and soil type on mineral N release from poultry and dairy manures. *Soil Sci. Soc. Am. J.* 47: 1129-1133.
30. Haas, J., A. Bar-Tal, **B. Bar-Yosef** and J. Krikun (1986) Nutrients availability effects on vesicular?arbuscular mycorrhizal bell pepper seedlings and transplants. *Ann. Appl. Biol.* 108: 171-179.
31. **Bar-Yosef, B.** (1987) Selenium desorption from Ca-kalinite. *Commun. Soil Sci. Pl. Anal.* 18: 771-779.
32. **Bar-Yosef, B.** and D. Meek (1987) Se sorption by kaolinite and montmorillonite. *Soil Sci.* 144: 11-19.
33. Krikun, H.J., J.H. Haas and **B. Bar-Yosef** (1987) Use of VA mycorrhizal- fungus inoculum in soils and arid and semi-arid climates: a field study with bell pepper and transplants. *Angew Botanik* 61: 97-105.
34. Haas, J.H., **B. Bar-Yosef, J.** Krikun, R. Barak, T. Markovitz and S. Kramer (1987) VAM?fungus infestation and phosphorus fertigation to overcome pepper stunting after methyl bromide fumigation. *Agron. J.* 79: 905-910.
35. **Bar-Yosef, B.**, R. Rosenberg and I. Afik (1988) Fluorine sorption by montmorillonite and kaolinite. *Soil Sci.* 145: 194-200.
36. **Bar-Yosef, B.** and R. Rosenberg (1988) Response of corn and tomato plants to fluoride concentration in solution culture. *Agron. J.* 80: 173-177.
37. **Bar-Yosef, B.**, S. Schwartz, T. Markovitz, B. Lucas and R. Assaf (1988) Effect of root volume and nitrate solution concentration on growth, fruit yield and temporal N and water uptake rates by apple trees. *Pl. Soil* 107: 49-56.

38. Bar-Tal, A., **B. Bar-Yosef** and Y. Chen (1988) Effect of fulvic acid and pH on Zn sorption by montmorillonite. *Soil Sci.* 146: 367-373.
39. **Bar-Yosef, B.**, U. Kafkafi, R. Rosenberg and G. Sposito (1988) Phosphorus adsorption by kaolinite and montmorillonite: I. Effect of time, ionic strength, and pH. *Soil Sci. Soc. Am. J.* 52: 1580-1585.
40. Kafkafi, U., **B. Bar-Yosef**, R. Rosenberg and G. Sposito (1988) Phosphorus adsorption by kaolinite and montmorillonite: II. Organic anion competition. *Soil Sci. Soc. Am. J.* 52: 1585-1589.
41. **Bar-Yosef, B.** Sagiv and T. Markovitz. (1989) Sweet corn response to surface and subsurface trickle phosphorus fertigation. *Agron. J.* 81: 443-447.
42. Klein, R., I. Levin, **B. Bar-Yosef**, R. Asaf, A. Berkovitch (1989) Drip nitrogen fertigation of Starking Delicious apple trees. *Pl. Soil* 119: 305-314.
43. Hadas, Aviva, **B. Bar-Yosef** and R. Fortnoy (1990) Extractability of phosphorus in manure pellets enriched with fertilizer P. *Soil Sci. Soc. Am. J.* 54: 443-448.
44. Bar-Tal, A., **B. Bar-Yosef** and U. Kafkafi (1990) Pepper seedling response to steady and transient nitrogen and phosphorus supply. *Agron. J.* 82: 600-606.
45. Bar-Tal, A., **B. Bar-Yosef** and U. Kafkafi (1990) Pepper transplant response to root volume and nutrition in the nursery. *Agron. J.* 82: 989-995.
46. Martinez Hernandez, J.J., **B. Bar-Yosef** and U. Kafkafi (1991) Effect of surface and subsurface drip fertigation on sweet corn rooting, uptake, dry matter production and yield. *Irrig. Sci.* 12: 153-159.
47. Bar-Tal, A., **B. Bar-Yosef** and Y. Chen (1991) Validation of a model of the transport of zinc to an artificial root. *J. Soil Sci.* 42: 399-411.
48. Phene, C.J., K.R. Davis, R.B. Hutmacher, **B. Bar-Yosef**, D.W. Meek and J. Misaki (1991) Effect of high frequency surface and subsurface drip irrigation on root distribution of sweet corn. *Irrig. Sci.* 12:135-140.
49. Ran, Y., **B. Bar-Yosef** and A. Erez (1992) Root volume influence on dry matter production and partitioning as related to nitrogen and water uptake by peach trees. *J. Plant Nutrition* 15: 713-726.
50. Ganmor-Neumann, R., **B. Bar-Yosef**, A. Shanzer and J. Libman (1992) Synthetic siderophore mediated iron uptake by corn roots. *J. Plant Nutrition* 15:1027-1037
51. Bar-Tal, A., **B. Bar-Yosef** and U. Kafkafi (1992) Modeling pepper seedling growth and nutrients uptake as a function of cultural conditions. *Agron J.* 85:718-724.
52. Erez, A., Y. Ran and **B. Bar-Yosef** (1992). The effect of restricted root volume on the development, yield and dry matter partitioning in young fruiting peach trees. *Acta Hort.* 322:199-214.
53. Ran, Y., **B. Bar-Yosef** and A. Erez (1993). Root volume effects on N uptake and partitioning in peach trees. *Agron. J.* 86:530-534.
54. Silber, A., **B. Bar-Yosef**, A. Singer and Y. Chen (1994). Mineralogical and chemical composition of pyroclastic rocks from Mt Peres in Northern Israel. *Geoderma* 63:123-144.
55. **B. Bar-Yosef** and P. Imas (1995). Tomatoes response to phosphorus nutrition via drip fertigation. In: *Microirrigation for a changing world.* ASAE 200-208.

56. **Bar-Yosef, B.** and P. Imas (1995). Phosphorus fertigation and growth substrate effects on dry matter production and nutrient contents in greenhouse tomatoes. *Acta Hort.* 401:337-346.
57. Imas, P., **B. Bar-Yosef**, I. Levkovitch and M. Keinan (1996). Orthophosphate solubility in irrigation waters differing in ionic composition. *Fertilizer Res.* 44:73-78.
58. Imas, Patricia, **B. Bar-Yosef**, U. Kafkafi, Ruth Ganmore-Neumann. (1997). Release of carboxylic anions and protons by tomato roots in response to ammonium/nitrate ratio and pH in nutrient solution. *PI Soil* 35:35-39.
59. Imas, Patricia, **B. Bar-Yosef**, U. Kafkafi, Ruth Ganmore-Neumann. (1997). Phospahte induced carboxylate and proton release by tomato roots. *PI Soil* 35:35-39.
60. Imas, Patricia, **B. Bar-Yosef**. (1998). Response of lettuce plants grown in different substrates to phosphorus fertigation. *Acta Hort.* 458:171-178.
61. **Bar-Yosef, B.** (1999). Advances in fertigation. *Adv. Agron.* 65:1-77.
62. **Bar-Yosef, B.**, R.D. Rogers, J.H. Wolfram, and E. Richman (1999). *Pseudomonas cepacia* mediated rock phosphate solubilization in kaolinite and montmorillonite suspensions. *Soil Sci. Soc. Am. J.* 63:1703-1708
63. Silber, A., **B. Bar-Yosef**, and Y. Chen (1999). pH dependent tuff dissolution kinetics. *Geoderma* 93:125-140.
64. **Bar-Yosef, B.**, Levkovich, I., and Markovich, T. (1999). Pepper response to leachate recycling in a greenhouse in Israel. *Acta Hort.* 548:357-364
65. **Bar-Yosef, B.**, Levkovich, I., and Markovich, T. (2000). *Gypsophila paniculata* response to leachate recycling in a greenhouse in Israel. *Acta Hort.* 554:193-203
66. **Bar-Yosef, B.**, Fishman, Svetlana, and Klaering, H.P. (2004). A model based decision support system for closed irrigation loop greenhouses. *Acta Hort.* 654:107-121.
67. **Bar-Yosef, B.**, Markovich, T., and Levkovich, I. (2005). Lettuce response to leachate recycling in an arid zone greenhouse. *Acta Hort.* 697:243-250.
68. Kläring, H.-P.; **Bar-Yosef, B.**; Fishman, S. 2005. Hydroponic at the optimum : model based management for closed hydroponic production. (In German), *Gemüse* 41 (4), 26-27.
69. **Bar-Yosef**, B., A.C. Chang and A.L. Page (2005) Mass balance modeling of arsenic processes. *Environ. Geochem. And Health* 27:177-184.
70. **Bar-Yosef, B.**, Fishman, Svetlana, and Klaering, H.P. (2006). A model describing root growth and water, N and Cl uptake in closed loop irrigation systems. *Acta Hort.* 718:435-443.
71. Y. Ben-Yephet, M. Reuven, A. Zviebil, Y. Szmulewich, I. Lavkovits, T. Markovits, S. Soriano, and **B. Bar-Yosef**. (2006) Effect of Nutrition on Deformation Disease in *Gypsophila paniculata* Mother Plants. *Phytopathol* 96:771-776
72. Kyuchukova, M.A., C. Büttner, J. Gabler, **B. Bar-Yosef**, R. Grosch, H.-P. Kläring. (2006). Evaluation of a method for quantification of *Pythium aphanidermatum* in cucumber roots at different temperatures and inoculum densities. *Journal of Plant diseases and Protection* 113:113-119.

73. H.-P. Kläring and **B. Bar-Yosef**. (2007). Greenhouse tomato response to CO₂ enrichment. *Agricul. and Forest Meteorol.* 143:208-216.

72. Kyuchukova, M.A., C. Buttner, J. Gabler, B. Bar-Yosef, R. Grosch, H.P. Kläring (2006). Evaluation of a method for quantification of *Pythium aphanidermatum* in cucumber roots at different temperatures and inoculum densities. *Journal of Plant diseases and Protection* 113:113-119.

73. Kläring, H.P. and B. Bar-Yosef. (2007). Greenhouse tomato response to CO₂ enrichment. *Agricul. and Forest Meteorol.* 143:208-216.

74. Silber, A., **B. Bar-Yosef**, I. Levkovitch, L. Kautzky, D. Minz (2008). Kinetics and mechanisms of pH-dependent Mn(II) reactions in plant-growth medium. *Soil Biol. Biochem.* 40:2787-2795.

75. **Bar-Yosef, B.**, N.S. Mattson, H.J. Lieth (2009). Effects of NH₄:NO₃:urea ratio on cut roses yield, leaf nutrients content and proton efflux by roots in closed hydroponic system. *Scientia Horticulturae* 122:610-619.

76. A. Silber, A., B. Bar-Yosef, I. Levkovitch, S. Soryano (2010). pH-Dependent surface properties of perlite: Effects of plant growth. *Geoderma* 158:275-281.

Articles in reviewed journals in Hebrew

1. **Bar-Yosef, B.** (1976). Effects of various trickle irrigation and fertilization regimes on nutrients and water distribution in two sandy soils and nutrient uptake by tomato plants. Pamphlet No. 161. Agricultural Research Organization, Bet Dagan, Israel

2. **Bar-Yosef, B.** (1999). Long-term effects of manuring and N-fertilization on crops and N and solutes balance in the soil in the Permanent Plot Experiment at Gilat. *Israeli Agric. Res.* 10:31-53 (in Hebrew, with English annotated Tables and Figures)

Books, book chapters and invited reviews

1. **Bar-Yosef, B.** and U. Kafkafi (1971) A new approach to evaluating the effective root area of field crops. In: Ed. R.M. Samish. *Recent Advances in Plant Nutrition*. Gordon and Breach Science Publishers, N.Y. 1971. pp. 281-290.

2. **Bar-Yosef, B.** and J.R. Lambert (1979) Corn and cotton root growth in response to osmotic potential and nitrate and oxygen concentrations in nutrient solutions. In: Eds. J.L. Harley and R.S. Russell. *The Soil Root Interface*. Academic Press, N.Y. 1979. pp. 287-288.

3. Kafkafi, U. and **B. Bar-Yosef** (1980) Surface reactions of the macro-nutrients in soils. In: Eds. A. Banin and U. Kafkafi. *Agrochemicals in Soils*. Pergamon Press, Oxford 1980. pp. 11-20.

4. Fishman, S., **B. Bar-Yosef** and H. Talpaz (1981) A mathematical description of Zn movement to single roots in soils. In: Eds. R. Vichnevetsky and R.S. Stepleman. *Adv. Computer Methods for Partial Differential Equations*. Publ. IMACS, 1981. pp. 381-384.

5. Lobel, R., J. Schiffman, **B. Bar-Yosef** and I.S. Wallerstein (1984) Response of peanuts?rhizobium symbiosis to mineral nitrogen and trickle irrigation rate. In: Ed. B.S. Ghai. *Symbiotic Nitrogen Fixation*. USG Publishers and Distributors, India. 1984. Vol. I. pp. 95-107.

6. **Bar-Yosef, B.** (1988) Control of tomato fruit yield and quality through fertigation. In: Ed. D. Rimon. *Optimal Yield Management*. Avedury, Gower Publishing Co., England. pp. 175-184.

7. **Bar-Yosef, B.**, I. Afik and R. Rosenberg. (1989) Fluoride sorption media. In: Eds. Bar Yosef, B., N.J. Barrow and Y. Goldshmid. *Inorganic Contaminants in the Vadose Zone*. Springer-Verlag, New York 1989. *Ecological Studies* 74, pp. 75-88.
8. **Bar-Yosef, B.** (1990) Root excretions and their environmental effects: influence on availability of phosphorus. In: Eds. Y. Waisel, U. Kafkafi and A. Eshel. *Plant Roots: The Hidden Half*. Marcel Dekker, New York, 1990. p. 529-557 (also in second edition, 1995, pp. 581-605).
9. Threadgill, E.D., Eisenhauer, D.E., **B. Bar-Yosef** and J.R. Young (1990) Chemigation. In: Eds. G.J. Hoffman, T.A. Howell and K.H. Solomon. *Management of Farm Irrigation Systems*. American Soc. Agric. Eng. pp. 751-780.
10. **Bar-Yosef, B.** (1991) Fertilization under drip irrigation. In: Ed D. A. Palgrave. *Fluid Fertilizer Science and Technology*. Marcel Dekker, New-York 1991 pp 285-329.
11. Fishman, S. and **B. Bar-Yosef** (1995). Simulation of N uptake from soil and partitioning in potato plants: model description and sensitivity analysis. In: A.J. Haverkort and D.K.L. MacKerron (eds). *Potato Ecology and Modeling of Crops Under Conditions Limiting Growth*, 147-166. Kluwer Academic Publishers, Netherlands.
12. Scaife, A., **B. Bar-Yosef** (1995). Fertilizing for High Yield and Quality Vegetables: Nutrient and Fertilizer Management in Field Grown Vegetables. IPI-Bulletin No 13. Internatl. Potash Institute, Basel, Switzerland (104 p).
13. **Bar-Yosef, B.** (1996) Root excretions and their environmental effects: influence on availability of phosphorus. In: Eds. Y. Waisel, U. Kafkafi and A. Eshel. *Plant Roots: The Hidden Half*. Marcel Dekker, New York, NY. p. 581-605 (second edition).
14. **Bar-Yosef, B.** (2003) Phosphorus dynamics. In: Benbi, D.K. and R. Nieder (Eds) *Handbook of Processes and modeling in the soil-plant system*. The Haworth Press, Inc., New York. P. 483-523.
15. A. Silber, **B. Bar-Yosef**, A. Singer and Y. Chen. (2005). Mineralogical and chemical composition of tuffs from Mt. Peres. In: Eds. M. Reuveni and M. Livneh. *Advances in the Golan Research: Man and landscape*. Ramot Publishing Tel Aviv University pp 343-355.
16. **Bar-Yosef, B.** (2007) Crops response to solution recycling in closed loop irrigation systems. In: Eds. Michael Raviv and J.H. Heinrich Lieth. *Soilless Culture: Theory and Practice*. Elsevier NY.

Articles of symposia proceedings (* indicates a reviewed paper)

1. Kafkafi, U. and **B. Bar-Yosef** (1969) The effect of pH on the adsorption and desorption of silica and phosphate on and from kaolinite. *Proc. of the International Clay Conference, Tokyo, Japan, 1969*. pp. 691-696.
2. **Bar-Yosef, B.**, J. Ben-Asher and U. Kafkafi (1974) Application of an irrigation model and fertilizer considerations in growing tomato on sand dunes. *Proc. Colloq. Plant Analysis and Fertilization Problems*. Hannover, W. Germany, 1974. pp. 34-43.
3. **Bar-Yosef, B.** (1980) Optimizing nitrogen fertigation and rooting volume of unprotected drip-irrigated tomato. *Proc. Franco-Israeli Colloq. Lewis Phenomenes de Transport de l'eau et des solutes et l'irrigation*. Avignon, 1980. pp. 97-105.
4. **Bar-Yosef, B.** (1982) Trickle irrigation and fertilization of Iceberg lettuce. *Proc. Ninth Intern. Plant Nutrition Colloq.*, Warwick Univ., U.K. 1982. pp. 33-38.

5. Wallerstein, I.S., **B. Bar-Yosef**, B. Sagiv, R. Lobel and J. Schiffmann. (1982) Effects of trickle irrigation rate and interval and of fertilization level on rhizobium-inoculated peanuts. Proc. Am. Peanut Education Soc. Inc. 14, 98.
- 6.b Asher, A. and **B. Bar-Yosef** (1983) Computer prediction of precipitation in drip irrigation systems. Proc. Third Intern. Irrigation Conf., Tel Aviv., 1983. pp. III-3(I).
7. **Bar-Yosef**, B. (1985) Potassium supply to field crops grown under drip irrigation and fertilization. Proc. Potassium Symposium, Pretoria, South Africa 1985. pp. 185-188.
- 8.b Phene, C.J. and **B. Bar-Yosef** (1986) Fertilization of high-yielding subsurface trickle irrigated tomatoes. Proc. California Fertilizer Conference, 1986. pp. 33-43.
9. **Bar-Yosef**, B. (1987) Effect of soil-water status as affected by irrigation on potassium transport in soils. Proc. 20th Colloq. Intern. Potash Inst., Baden bei Wein, Austria, 1987. pp. 319-335.
10. **Bar-Yosef**, B. (1989) The effect of root excretion on the mobility of phosphorus in soil. British-Israeli Symposium on "Transport Processes in Soil", Rothamsted, 14 Sep. 1989.
- 11.a Bar-Tal, and **B. Bar-Yosef** (1989) Validation of a model of the transport of Zn to roots. British-Israeli Symposium on "Transport Processes in Soil", Rothamsted, 14 Sep. 1989.
12. **Bar-Yosef**, B. (1990) Vegetable production and fruit yield and quality under combined irrigation and fertilization. FAO/ECE symposium on methods and concepts for the use of organic and chemical fertilizers. Geneva, Jan., 1991.
- 13.a Ran, Y., A. Erez and **B. Bar-Yosef** (1992) The effect of restricted root volume on the development, yield and dry matter partitioning in young fruiting peach trees. Sixth International Symposium on Orchards and Plantation systems. Israel, June 1992.
- 14.a Fishman, S. and **B. Bar-Yosef** (1994) Simulation of N uptake and partitioning in potato plants in relation to yield: model description and sensitivity analysis. In: Ecology and modeling of potato crops under conditions of limiting growth. Wageningen, The Netherlands, May 1994.
- 15.a **Bar-Yosef**, B., B. Sagiv, T. Markowitch and I. Levkovitch (1995). Phosphorus placement effect on sweet corn growth, uptake and yield. pp. 141-154. In: The Daliah Gredinger International Symposium on Fertigation, Haifa, Israel, 1995.
- 16.b Silber, A., **B. Bar-Yosef** and M. Raviv (1995). The effects of rose growing on the chemical properties of tuff and on nutrient availability. pp. 227-240. In: The Daliah Gredinger International Symposium on Fertigation, Haifa, Israel, 1995.
17. **Bar-Yosef**, B. (1996). Greenhouse muskmelon response to irrigation rate and K concentration in water. pp. 35-50. In: Proc. 9th Inter. Cong. Soilless Culture. St Helier, Jersey, April 1996, Inter. Soc. Soilless Culture.
18. Friedman, S.P. and **B. Bar-Yosef** (1997). An operational model for predicting nitrogen uptake and leaching under conditions of fertigation with municipal refuse water. pp. .In: The Daliah Gredinger International Symposium on Fertilization and the Environment. Haifa, Israel, 1997.
19. **Bar-Yosef**, B., B. Sagiv, and S.Y. Feng (1999). Long term effects of manuring and N-fertilization in the Permanent Plot Experiment at Gilat, Israel, on crop and N and solutes balance in the soil. 5th International Meeting on Soils with Mediterranean type of climate. Barcelona, Spain, 4-9 July 1999.

20. Kramer, S., **Bar-Yosef, B.**, Tzuberi, G., Kritchman, G., Kenig, A., Fernandez Rodriguez, E.J. (2003). Recirculacion de agua y fertilizantes en un cultivo de rosas bajo invernadero. pp. 137-144. In: Proc. Innovaciones tecnologicas en cultivos de invernadero. Universidad de Almeria, Spain, December 2002.

21. **B. Bar-Yosef**, G. Kritzman, I. Levkovich, P. Klaering. 2008. Effect of Nitrogen Source and Concentration in Recirculated Solution on Incidence of Cucumber Mortality by Pythium and Fusarium Crown Rot. In press Acta Hort. 8--:

Editor of books

1a. **Bar-Yosef, B.**, M.J. Barrow and Y. Goldshmid. 1989. Inorganic contaminants in the vadose zone. Springer-Verlag, New York. Ecological Studies 74. 1989.

2a. **Bar-Yosef, B.**, and I. Seginer. 1999. Models for plant growth and control of the shoot and root environments in greenhouses. ISHS Workshop Proceedings. Acta Horticulturae 507.

Final Research Reports (selected from over 30 final reports)

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2.a **Bar-Yosef, B.**, J.R. Lambert (1977) Simulation of root growth and water and nitrate uptake and transport in the soil under field conditions. Agric. Eng. Res. Series No. 24 Dept. Agric. Eng., SC Experiment Station, Clemson Univ., SC

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- 25.a **Bar-Yosef, B.**, M. Fuchs, Irit Levkovitch, S. Kramer, M. Bruner, G. Shelef, E. Matan, D. Shmueli, I. Dori, H. Yekezkhel. 2007. Water recycling in greenhouses: State of the art and future challenges. *Water and Irrig.* 488:14-20 (Hebrew)

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CURRICULUM VITAE

Personal

1941 Born in Tel Aviv, Israel.
 1956-1959 High school education in Tel-Aviv
 1959-1962 Military service
 Marital Status: Married with three sons and one daughter.

University Education and additional training

1963-1966 B.Sc. in Agriculture (Faculty of Agriculture, The Hebrew University of Jerusalem).
 1966-1968 M.Sc. in Soil Science (major) and Field Crops (Faculty of Agriculture, The Hebrew University of Jerusalem).
 Thesis title: Phosphorus, silica and hydroxyl adsorption by kaolinite
 Supervisor: Prof N. Lahav
 1968-1972 Ph.D. in Soil Science (The Hebrew University of Jerusalem).
 Thesis title: A model of P uptake by plant roots in soil
 Supervisors: Prof U. Kafkafi and Prof Y. Vaadia
 1972-1973 Post doctoral position at the Dept. of Soil Science, The University of Western Australia.
 With Prof A. Posner and J.P. Quirk

PhD students' supervisor (senior advisor in all cases; all students graduating from the Hebrew University)

A. Bar-Tal; Thesis: Effect of pepper seedling nutrition in the nursery on transplants development, establishment in the field and fruit yield (with Prof U. Kafkafi) Graduation 1987.

A. Silber; Thesis: Chemical properties and surface reactions of pyroclastic materials from Mount Peres, The Golan Heights (with Prof Y. Chen) Graduation 1991.

J.J. Martinez Hernandez; Thesis: Plants response to subsurface fertigation with P and N fertilizers (with Prof U. Kafkafi) Graduation 1992.

Patricia Ames; Thesis: Chemical and biological processes in the rhizosphere affecting mobility and uptake of phosphorus by plants (with Prof U. Kafkafi) Graduation 1997.

Guidance of foreign scholars (one year each):

M. Lexa; Research subject (towards PhD)- A greenhouse tomato management decision model. 1991

Dr S. Feng; Research subject- Simulation of long-term nitrogen behavior in agricultural soils. 1995

Editorial Responsibilities

1994-1996 Editorial Board, Fertilizer Research

1989 Editor: Bar Yosef, B., M.J. Barrow and Y. Goldshmid. 1989. Inorganic contaminants in the vadose zone. Springer Verlag, New York. Ecological Studies 74. 1989.

1999 Editor: Bar-Yosef, B., and I. Seginer. 1999. Models for plant growth and control of the shoot and root environments in greenhouses. ISHS Workshop Proceedings. Acta Horticulturae 5