

LITERATURE CITED

7. LITERATURE CITED

- Atkinson, D. 1973. Some general effects of phosphorus deficiency on growth and development. *New Phytol.* 72 : 101-111.
- , 1974. Field studies on root systems and root activity. Rep. East Malling Res. sta. 1973. p. 69.
- , 1978. The use of soil resources in high density planting systems. *Acta Hort.* 65: 79-89.
- , and A.W. Davison. 1973. The effects of phosphorus deficiency on water content and response to drought. *New Phytol.* 72 : 307-313.
- , and G.C. White. 1976. The effect of the herbicide strip system of management on root growth of young apple trees and the soil zones from which they take up mineral nutrients. Rpt. East Malling Res. Sta. 1975. p. 165-167.
- , and S.A. Wilson. 1980. The growth and distribution of fruit tree roots : some consequences for nutrient uptake, P. 259-272. In D. Atkinson, J.E. Jakson, R. O. Sharples, and W.M. Waller (eds.). *The mineral nutrition of fruit trees.* Butterworths, Borough Green, U.K.

- Babuk, V.I. 1971. The effect of tree age on the development of the root system growth, productivity of apple trees (in Russian). Trudy Kiskinev. Sel' Kokh. Inst. 81:70-76.
- Backenbach, J. and J.H. Gourley. 1932. Some effects of different cultural methods upon root distribution of apple trees. Proc. Amer. Soc. Hort. Sci. 29:202-204.
- Baltruschat, H. and F. Schonbeck. 1975. Untersuchungen uber den einfluss der endotropen mycorrhizae auf den befall von taback mit thielaviopsis basicola phytopaht. Z. 84: 172-188.
- Balyis, G.T.S. 1971. Endogonaceous mycorrhizae synthesized in Leptospermum (Myrtaceae) N.Z.J.Bot. 9: 293-296.
- Bergamini, A. 1965. The influence of some herbaceous species on peach root distribution (in Italian). Atti Conger. Pesco Verona 1965. p. 3.
- Bevington, K.B. and W.S. Castle. 1985. Annual root-growth pattern of young citrus trees in relation to shoot growth, soil temperature, and soil water content. J. Amer. Soc. Hort. Sci. 110 (6) : 840-845.

- Biermann, B., and R.G. Linderman. 1983. Effect of container plant growth medium and fertilizer phosphorus establishment and host growth response to vesicular arbuscular mycorrhizae. J. Amer. Soc. Hort. Sci. 108 (6) 962-971.
- Boswell, S.B., C.D. McCarty, and L.N. Lewis. 1975. Tree density affects large root distribution of "Washington" navel orange trees. Hortscience 10:593-595.
- Bowen, G.D., and C. Theodorou. 1973. Growth of ectomycorrhizal fungi around seeds and roots in : G.C. Marks and T.T. Kozlowski (Editors) Ectomycorrhizae. Academic press. New York, pp. 107-150.
- Boyer, E.P., J.R. Ballington and C.M. Mainland. 1982. Endomycorrhizae of *vaccinium corymbosum* L. in North Carolina. J. Amer. Soc. Hort. Sci. 107(5): 751-754.
- Brown, J.D. and O. Lilleland. 1946. Rapid determination of potassium and Sodium in plant material and soil extracts by flame photometry. Proc. Amer. Soc. Hort. Sci. 48:341-346.
- Burgeff, H. 1961. Mikrobiologie des Hochmoeres. G. Fischer verlog, Stuttgart. 197 pp.
- Bziava, M.L. 1966. The development of the tea plant root system in relation to fertilizers (in Russian). Subtrop. Kultury 3:3-17.

- Chalmers, D.J. and B. VAN DEN ENDE. 1975. Productivity of peach trees: factors affecting dry weight distribution during tree growth. *Ann. Bot.* 39: 423-432.
- Chapman, H.D. and P.F. Pratt. 1961. *Methods of Analysis for Soil, Plants and Waters.* Univ. of Calif., Division of Agric. Sci.
- Clarkson, D.T., J. Sanderson, and R.S. Russell. 1968. Ion uptake and root age. *Nature* 220: 805-806.
- Coxwell, M.A., and C.R. Johnson. 1985. Effects of Vesicular arbuscular mycorrhizae and nitrogen source on growth and transport amino acid composition of Pittosporum tobira. *J. Amer. Soc. Hort. Sci.* 110 (6) : 800-803.
- Daft, M.J. and T.H. Nicolson. 1972. Effect of Endogone mycorrhizae on plant growth. IV. Quantitative relationships between the growth of the host and the development of the endophyte in tomato and maize. *New Phytol.*, 71:287-295.
- Devlin, M.R. 1972. *Plant Physiology*, Van Nostrand. Reinhold Company, New York, U.S.A.
- Dowding, E.S. 1959. Ecology of Endogone. *Trans. Br. Mycol. Soc.* 42:445-457.
- Druchek, A.A. and V.S. Zakotin. 1972. The formation of the apple tree root system in relation to pre-planting soil preparation (in Russian). *Voprosy Intensifikatsii sel'skokhozyaistvennogo proizuodstva*, Moscow. 141-144.

- Duncan, D.B. 1955. Multiple range and multiple F. Tests Biometrics, 11:1-42.
- Edrees, M.H. 1982. Studies on growth of citrus seedlings. Ph.D. Thesis, Fac. of Agric. Al-Azher, University, A.R.E. 120-pp.
- El-Azab, E.M. 1968. Effect of water table on vegetative growth, yeild and the nutritional status of Washington navel orange and Beladi mandarin trees. Ph. D. Thesis, Coll. Agric. Alex. Univ., U.A.R.
- Eric , Y. and D.J. Werner. 1982. Early season root and shoot growth of "Golden Delicious" apple on four rootstocks as affected by pruning at planting. J. Amer. Soc. Hort. Sci. 107 (5) : 822-826.
- Faust, M. 1980. Interaction between nutrient uptake and photosynthesis. P. 193-199. In . D. Atkinson, J.E. Jackson, R.O. Sharples, and W. M. Waller (eds.) The mineral nutrition of fruit trees. Butterworths, Borough green, U.K.
- Finn, R.F. 1942. Mycorrhizal inoculation of soil of low fertility. Black Rock for, paper, 1:116-117.
- Fletcher, R.A. and D.Mc cullagh. 1971. Cytokinin induced chlorophyll formation in cucumber cotyledons. Planta 101:88-90.

- Ford, H.W. 1954. The influence of rootstock and tree age on root distribution of citrus. Proc. Amer. Soc. Hort. Sci. 63:137-142.
- Furlan, V. and J.A. Fortin. 1973. Formation of endomycorrhizae by Endogone calospora on Allium cepa under three temperature regimes. Naturaliste candien, 100: 467-477.
- Gendiah, H. El S. M. 1982. Effect of the system of soil management on root growth, distribution and mineral content of "Washington" navel orange trees. M. Sc. Thesis Fac. of Agric. Moshtohor, Zagazig, University A.R.E. 119-pp.
- Gerdemann, J.W. 1968. Vesicular arbuscular mycorrhizae and plant growth. Department of plant pathology, Univ. of Illinois Urbana, Illinois Ann. Rev. Phytopath. 6: 397-418.
- , 1974. Mycorrhizae, p. 205-217. In. 1. carson (ed.) The plant root and its environment. Univ. Press Virginia Charlottesville.
- , 1975. Vesicular arbuscular mycorrhizae phosphorus, zinc, copper, and sewage sludge. Proc. 7th N. Amer. Conf. on mycorrhizae, Univ. Laval, Quebec : 48 (Abstr).
- Girton, R.E. 1927. The growth of citrus seedlings as influenced by environmental factors. Calif. Univ. Publ. Agric. Sci., 5:83-117. (Webber, H.J., and L.D. Batchelor, 1948. The Citrus Industry. Vol. 1. Chap. 6 pp. 715-716. Univ. of Calif. Press).

- Goode, J.E. and K.J. Hyrycz. 1964. The response of Laxton's superb apple trees to different soil moisture conditions. J. Hort. Sci. 39:254-276.
- Gur, A., J. Hepner, and Y. Mizrahi. 1976. The influence of root temperature on apple trees. I. Growth responses related to the application of potassium fertilizer. J. Hort. Sci. 51:181-193.
- Gurung, H.P. 1979. The influence of soil management on root growth and activity in apple trees. M. Phil. Thesis, University of London.
- Hacskaylo, E. 1971. Metabolite exchanges in ectomycorrhizae in : E. Hacskaylo (Editor) Mycorrhizae, USDA for Serv. Mise. Publ. 1189, pp. 175-182.
- Harley, J.L. 1969. The Biology of Mycorrhizae 2nd Edition, Leonard Hill, London 334 pp.
- Hattingh, M.I. and J.W. Gerdemann. 1975. Inoculation of vesicular arbuscular mycorrhizae 1. Growth of Glomus fasciculatus - inoculated plants in phosphate - deficient soils. New phytol. 70:14-27.
- Hayman, D.S. 1970. Endogone spore numbers in soil and vesicular - arbuscular mycorrhizae in wheat as influenced by season and soil treatment. Transactions of the British mycological society, 54, 53.

- Hayman, D.S. 1974. Plant growth responses to vesicular-arbuscular mycorrhizae. VI. Effect of light and temperature. *New Phytologist*, 73, 71.
- , . 1982. Influence of soils and fertility on activity and survival of vesicular - arbuscular mycorrhizal fungi, *phytopathology* 72:1119-1125.
- , . and B. Mosse. 1970. Plant growth responses to vesicular - arbuscular mycorrhizae. 1. Growth of Endogone - inoculated plants in phosphate deficient soils. *New Phytol.* 69.
- Huxley, P. A., R.Z. Patel, A.M. Kabaara, and H. W. Mitchell. 1974. Tracer studies with ³²P on the distribution of functional roots of Arabica coffee in kenya. *Ann. Appl. Biol.* 77:159-180.
- Jackson, M.L. 1960. *Soil Chemical Analysis*. Prentice-Hall, Inc, Englewood Cliffs, U.S.A.
- Jamalian, J. and P.I. Bellet. 1968. Nutritional value of Middle Eastern, Food stuff, IV. Amino acid composition. *J. Soc. Fd. Agric.* 19, 378.
- Kamal, M.A.M. 1951. Growth and nitrogen fractions of Trifolium alexandrinum under conditions of different phosphatic levels with reference to the effect of pH value in silage. Ph. D. Thesis Cairo, Univ. Cairo.

- Keleg, F.M., F.M. Kitat and A.S. Montaser. 1970 ;
Studies on root distribution in mature
Baladi mandarin, Washington navel orange
and Housini lime trees. Alex. J. Agric.
Res. 18:87-95.
- Kilmer, V.J., and L.T. Alexander. 1949. Methods
of making mechanical analysis of soils.
Soil Sci. 68:15.
- Kleinschmidt, G.D. and J.W. Gerdemann. 1972. Stunting
of citrus seedlings in fumigated nursery
soils related to the absence of endomycorr-
hizal. Phyto pathology 62:1447-1453.
- Kolesnikov, V.A. 1966. Fruit Biology, Chap. 5, pp.
176, 177, 183, 188. Mir Publishers Moscow.
- Krasnoshtan, A.A. 1975. Growth of the root system of
Semi-dwarf apple trees in relation to diff-
erent minerals nutrition (in Russian). Navchnye
Trudy Ukrainskoi S-Kh Akademii 153:73-76.
- Krikun, J. and Y. Levy. 1980. Effect of vesicular
arbuscular mycorrhizae on citrus growth
and mineral composition. Phyto parasitica
8:3.
- Krupa, S. and G. Bränström. 1974. Studies on the nit-
rogen metabolism in ectomycorrhizae 11. Free
and bound amino acids in the mycorrhizal
fungus Suillus variegatus, in the root systems
of Pinus sylvestris and during their associa-
tion. Plant Physiol., 31: 274-283.

- Krupa, A., Fontana and M. Palenzona. 1973. Studies on the nitrogen metabolism in ectomycorrhizae. 1. Status of free and bound amino acids in mycorrhizal and nonmycorrhizal root systems of Pinus nigra and Corylus avellana, Plant Physiol., 28:1-6.
- Lambert, D.H.; D.E. Barker and H. Cole. 1979a. The role of mycorrhizae in the interactions of phosphorus with zinc, Copper and other elements. Soil Sci. Soc. Am. J. 43:976-980.
- ; R.F. Stouffer, and H. Cole. 1979b. Stunting of peach seedlings following soil fumigation. J. Amer. Soc. Hort. Sci. Vol. 104-No.4.
- Levisohn, I. 1956. Growth stimulation of forest tree seedlings by the activity of free-living mycorrhizal mycelia. Forestry 29: 53-59.
- Loomis, W.E. and C.A. Shull. 1937. Methods in Plant Physiology : 314-315. Mc Craw-Hill. Book Company. Inc. New York and London.
- Mac Donald, R.M. and M. Lewis. 1978. The occurrence of some acid phosphatases and dehydrogenases in the vesicular - arbuscular mycorrhizal fungus Glomus mosseae. New Phytol 80 : 125-141.
- Mackenzie, K.A.D. 1979. The development of the endodermis and phylayer of apple roots. Protoplasma 100:21-32.

- Maronek, D.W.; J.W. Herdrex, and J. Kiernan. 1981. Mycorrhizal fungi and their importance in Horticultural crop production Hort. Rev. 3: 172-213.
- Marx, D.H.; W.C. Bryan and C.B. Davey, 1970. Influence of temperature on aseptic synthesis of ectomycorrhizae by Thelephora terrestris and Pisolithus tinctorius Loblolly Pin. Forest Sci. 16: 424-431.
- Matt, J.K. 1968. Colorimetric determination of phosphorus in soil and plant material. soil Sc., 109, 214-220.
- Mehraveran, H. 1977. Mycorrhizal dependency of six citrus cultivars. Ph. D. Thesis, Univ. of Illinois, Urbana Champaign 68 p.
- Menge, J.A. 1977. Mycorrhizal fungi associated with citrus and their possible interactions with pathogens. Proc. Int. Soc. Citriculture. 72 : 321-325.
- ; W.M. Jarrell, C.K. Labanauskas, C. Huzar, E.L.V. Johnson and D. Sibert. 1982. Predicting mycorrhizal dependency of Troyer citrange on Glomus fasciculatus in California citrus soils and nursery mixes, Proc. Soil. Sci. Soc. Amer. 46 : 762-768.
- ; C.K. Labanauskas, E.L.V. Johnson and R.G. Platt. 1978. Partial substitution of mycorrhizal fungi for phosphorus fertilization in the greenhouse culture of citrus Soil. Sci. Soc. Am. J. 42: 926-930.

Menge, J.A., J. Larue, C.K. Labanauskas and E.L.V. Johnson.
1980. The effect of two mycorrhizal fungi
upon Growth and Nutrition of Avocado seed-
lings grown with six fertilizer treatments.
J. Amer. Soc. Hort. Sci. 105(3):400-404.

----- ; H. Lembright and E.L.V. Johnson. 1977,
Utilization of mycorrhizal fungi in citrus
nurseries. Proc. Int. Citriculture 1 : 129-
132.

----- ; R. G. , Platt, and E.L.V. Johnson.
1981. Vesicular - arbuscular mycorrhizal
fungi associated with citrus in Florida
and California and notes on their distri-
bution and ecology. Mycologia, Vol. 73 :
113-127.

----- , and B.A. Zentmyer. 1977. Growth resp-
onse and fertilization to species of myc-
orrhizal fungi. J. La. Rue. C.K. Labanauskas.
Citrus Research Center, A.E.S. Riverside
U.S.A.

Meyer, F.H. 1973. Distribution of ectomycorrhizae in
native and man-made forests. In: G.C. Marks
and T.T. Kozlowski (Editors). Ectomycorrhizae
Academic. Press, New York, pp 79-105.

Michel, K.A., Gilles ; J.K. Hamilton ; P.A. Robers
and F. Smith. 1956. Colorimetric method for
determination of sugars and related sub-
stances. Analytical Chemistry Vol. 28. No.
3: 350-355.

- Montaser, A.S; F.M. Keleg, and F.M. Kitat. 1970.
Studies on top and root growth in Baladi
mandarin, Washington navel orange and
Housini lime. Alex. J. Agric. Res. 19:
97-105.
- Mosse, B. 1973. Plant growth responses to VA mycorr-
izae IV. in soil given additional phosphate.
New Phytol, 72, 127.
- Muttiah, S. 1972. Effect of drought on mycorrhizal
associations of Pinus caribaea. Common-
wealth for, Rev. 51-116-120.
- Nemec, S. 1978. Response of six citrus rootstocks
to three species of Glomus, A. mycorrhizal
fungus. Proc. Fla. state Hort. Soc. 91:10-
14.
- , and F.I. Meridith. 1981. Amino acid
content of leaves in mycorrhizal and
nonmycorrhizal citrus rootstocks, Ann.
Bot. 47 : 351-358.
- Oskamp, J. 1932. The rooting habit of deciduous fruit
on different soil. Proc. Amer. Soc. Hort.
Sci. 29: 213-219.
- Parnas, Z. and Z. Wagner. 1931. Biochem., 125-253.
- Pate, J.S. 1980. Transport and partitioning of nitrogen-
ous solutes. Ann. Rev. Plant Physiol. 31:
313-340.

- Peuss, H. 1958. Untersuchungen zur ökologic und bedeutung der tabak mycorrhiza, Archiv Mikrobiöl 29:112-142.
- Piper, C.S. 1950. Soil and Plant Analysis. Inter Science publications, Inc. New York.
- Pregl, E. 1945. Quantitative Organic Micro Analysis 4th. Ed. J. Chundril, London.
- Preston, A.P. 1972. Apple rootstock studies : growth of trees on three clonal rootstocks planted with and without roots. J. Hort. Sci. 47: 329-335.
- Read, D.J. and D.P. Stribley. 1973. Effect of mycorrhizal infection on nitrogen and phosphorus nutrition of Ericaceous plants Nature (New Biol.) 244:81-82.
- Richards, L.A. 1954. Diagnosis and Improvement of Saline and Alkali Soils. U.S.D.A., Hand book No 60.
- , and B. Cockroft. 1975. The effect of soil water on root production of peach trees in Summer. Austral J. Agr. Res. 26: 173-180.
- , and R.N. Rowe. 1977. Root-Shoot interactions in peach : the function of the root. Ann. Bot. 41:1211-1216.

- Rogers, W.S. and M.C. Vyvyan. 1934. Root studies
V. Rootstock and soil effect on apple
root systems. J. Pomol. Hort. Sci. 12:
110-150.
- Savage, E.M., W.C. Copper and R.B. Pipper. 1954.
Root systems of various citrus rootstocks.
Proc. Fla. St. Hort. Soc. 58:44-48.
- Schenck, N.C. and D.P.H. Tucker. 1974. Endomycorrhizal fungi and the development of citrus seedlings in Florida fumigated soils. J. Amer. Soc. Hort. Sci. 99(3):284-287.
- Slankis, V. 1973. Hormonal relationship in mycorrhizae. P.231-298. In G.C. Marks and T.T. Kozlowski, (eds) Ectomycorrhizae, their ecology and physiology, Academic Press, New York and London.
- , . 1974. Soil factors influencing formation of mycorrhizae. Ann. Rev. Phytopathol, 12: 437-457.
- Smith, J. and J. Seakins. 1976. Chromatographic and electrophoretic technique. Vol. 1 4th ed. William Heinemann medical Book L. td. London.
- Steel, R.G.D. and J.H. Torrie. 1960. Principles and Procedures of Statistics. Mc Graw-Hill Book Company, Inc. U.S.A. pp.448-449.

- Tanas'ev, V.K. and V.V. Balan. 1977. The effect of rootstock and high rates of deep pre-planting fertilization on the development of apple tree root system (in Russian) Sadov. Vinogr. Vinod. Mold. 2:17-20.
- Till, M.R., and J.B.Cox. 1965. A guide to cultural practices for young citrus J. Agric S. Aust. 68: 232-3. (Hort. Abst. 35: 8654).
- Tucker, D.P.H. and C.A. Anderson. 1972. Correction of citrus seedlings stunting on fumigated soil by phosphate application. Proc. Fla. State Hort. Soc. 85:10-12.
- Van Staden, J. 1976. Seasonal changes in the cytokinin content of Ginkobiloba leaves. Plant physiol. 38.
- Van Wettstein, D. 1957. Chlorophyll, letal und der submik vas Nopische Formech shell der plastidis. Exptl-cell Res. 12:427-433.
- White, G.C. and R.I.C. Holloway. 1967. The influence of Simazine on a straw mulch on the establishment of apple in grassed down on cultivated soil. J. Hort. Sci. 42:377-389.
- Wilcox, H.E. 1971. Morphology of ectendomycorrhizae in Pinus resinosa in E. Hacskaylo (Editor), Mycorrhizae USDA. for Serv. Misc. Publ. 1189, pp. 54-68.

Wilson, S.A. and D. Atkinson. 1979. Water and mineral uptake by fruit tree roots. P. 372-382. In A. Riedacker and J. Gagnaire - Michard (eds.) Root physiology and symposia. Proc. IUFRO Symp. Sept. 11-15, 1978, CNRF. Nancy, France.