BIBLIOGRAPHY – NEUTRON PROBE

ABDUL-MAJID, S., Effect of different materials in soil on the neutron moisture gauge readings, Isotope Radiation Res. **22** (1990) 11–17.

ALLEN, R.G., "Error analysis of bulk density measurements for neutron moisture gage calibration", Management of Irrigation and Drainage Systems, Integrated Perspectives, Proc. ASCE Nat. Conf. on Irrigation and Drainage Engineering, Park City, UT, July 21–23, 1993, ASCE, New York (1993) 1120–1127.

ALLEN, R.G., et al., "Effect of moisture and bulk density sampling on neutron moisture gauge calibration", management of irrigation and drainage systems, integrated perspectives," Irrigation and Drainage Engineering, Proc. Am. Soc. Civil Engrs., National Conference on Park City, UT, July 21–23, 1993, ASCE, New York (1993) 1145–1152.

ALLEN, R.G., SEGURA, D., "Access tube characteristics and neutron meter calibration", Irrigation and Drainage Engineering, Proc. Nat. Conf. Am. Soc. Civil Engrs., Irrigation and Drainage Division, Durango, CO, July 11–13, 1990, ASCE, New York (1990) 21–31.

ANONYMOUS, Manual of Operation and Instruction, Sentry 200-AP, Troxler Electronic Laboratories, Inc. P.O. Box 12057, Research Triangle Park, NC 27709 (1991).

ARIBI, K., et al., Accuracies of neutron probe water content measurments for sandy soils, Soil Crop Sci. Soc. Florida Proc. **44** (1985) 44–49.

ARSLAN A., et al., The performance and radiation exposure of some neutron probes in measuring the wate content of the topsoil layer, Aust. J. Soil Res. **35** (1997) 1397–1407.

ARSLAN, A., RAZZOUK, A.K., Effects of gypsum on the neutron probe calibration curve, Soil Sci. **158** (1994) 174–180.

ASFAR, A.H., Influence of gravel on neutron probe calibration, International Agrophysics **4** (1988) 311–316.

AYDIN, M., Hydraulic properties and water balance of a clay soil cropped with cotton, Irrig. Sci. **15** (1994) 17–23.

BABALOLA, O., Field calibration and use of the neutron moisture meter on some Nigerian soils, Soil Sci, **126** (1978) 118–124.

BABALOLA, O., Influence of 'bound' water on the calibration of a neutron moisture meter, Soil Sci. **114** (1972) 323–324.

BATTIKHI, A.M., SULEIMAN, A.A., Uncertainties of soil moisture readings using neutron probe in Vertisols (Research note), Dirasat. (Agric. Sci.) **24** (1997) 335–345.

BELTRAME, L., TAYLOR, J.C., Use of the neutron probe for determination of soil moisture content in the field, [Uso da sonda de neutrons para determinacao da umidade do solo no campo] Revista Brasileira de Ciencia do Solo **4** (1980) 57–61.

BISHOP, C.W., PORRO, I., Comparison of neutron moisture gauges and a neutron tool for use in monitoring wells, Ground Water **35** (1997) 394–399.

BOCKER L., LOCHMANN E., Suitability of the VA-S-20.1 neutron probe for soil moisture measurements in skeletal forest soils, Archiv fur Naturschutz und Landschaftsforschung **16** (1976) 163–168.

BOHNE K., The calibration of neutron probes for determining the moisture content of mineral soils, Archiv fur Acker- und Pflanzenbau und Bodenkunde **19** (1975) 79–84.

BOMAN, B.J., HIGGINS, C., "Using neutron probes to aid irrigation scheduling", Irrigation and Drainage, Proc. Nat. Conf. Am. Soc. Civil Engrs., Irrigation and Drainage Division, Durango, CO, July 11–13, 1990, ASCE, New York (1990) 85–92.

BOWEN H.D., "Progress in calibration of nuclear gauges for soil compaction and tillage studies", Beltwide Cotton Production Research Conferences, Agricultural Engineers' Regional Research Committee, Memphis, Tennessee (1982) 178–179

CANNELL G.H., ASBELL C.W., The effects of soil-profile variations and related factors on neutron-moderation measurements, Soil Sci. **117** (1974) 124–127.

CANNON M.D., et al., Using hydraulic power to set neutron access tubes, Agric. Engrg. **64** (1983) 10–11.

CARNEIRO, C., DE JONG, E., In situ determination of the slope of the calibration curve of a neutron probe using a volumetric technique. Soil Sci. **139** (1985) 250–254.

CARRIJO, O.A., CUENCA, R.H., Precision of evapotranspiration estimates using neutron probe, J. Irrig. Drain. Engrg., ASCE **118** (1992) 943–953.

CARRIJO, O.A., CUENCA, R.H., Closure of discussion of precision of evapotranspiration estimates using neutron probe, J. Irrig. Drain. Engrg. **120** (1994) 991–993.

CHANASYK, D.S., NAETH, M.A., Measurement of near-surface soil moisture with a hydrogenously shielded neutron probe, Can. J. Soil Sci. **68** (1988) 171–176.

CHANASYK, D.S., NAETH, M.A., Field measurement of soil moisture using neutron probe, Can. J. Soil Sci.

76 (1996) 317–323.

CHEN, J., et al., Sampling design for soil moisture measurements in large field trials, Soil Sci. **159** (1995) 155–161.

COMEGNA, V., BASILE, A., Temporal stability of spatial patterns of soil water storage in a cultivated Vesuvian soil, Geoderma **62** (1994) 299–310.

COUCHAT P., Methodological and technical aspects of the neutron method for measuring soil moisture content [Aspects methodologiques et technologiques de la mesure neutronique de l'humidite des sols] Annales Agronomiques **28**(1977) 477–488.

CROCOLL R., et al., "Combined use of a new neutron and gamma-gamma probe for monitoring the watermovement within contaminated soils" Verslagen en Mededelingen, Commissie voor Hydrologisch Onderzoek TNO (1987) 207–213.

CUENCA, R.H., Hydrologic balance model using neutron probe data J. Irrig. Drain. Engrg. **114** (1988) 644–663.

CUENCA, R.H., Model for evapotranspiration using neutron probe data, J. Irrig. Drain. Engrg., ASCE **114** (1988) 644–663.

CULLEY, J.L.B., "Density and Compressibility" Soil Sampling and Methods of Analysis (CARTER, M.R., Ed.), Lewis Publishers, Boca Raton (1993).

DAVIDSON, J.M., et al., Influence of temperature on soil moisture neutron probes, Soil Sci. Soc. Am. Proc. **23** (1959) 251–252.

DELANEY, M.D., et al., "The establishment and monitoring of expansive soil field sites", Geotechnical Site Characterization: Volume I, Proceedings of the First International Conference on Site Characterization –ISC'98, Atlanta, Georgia, USA, 19–22 April 1998 (ROBERTSON, P.K., MAYNE, P.W., Eds.), (1998) 551–556

DICKEY, G.L., "Factors affecting neutron meter calibration" Irrigation and Drainage, Proc. Nat. Conf. Am. Soc. Civil Engrs., Irrigation and Drainage Division, Durango, CO, July 11–13, 1990, ASCE, New York (1990) 9–20.

DICKEY, G.L., "Field calibration of neutron gages: SCS method", Irrigation and Drainage, Proc. Nat. Conf. Am. Soc. Civil Engrs., Irrigation and Drainage Division, Durango, CO, July 11–13, 1990, ASCE, New York (1990) 192–201.

DICKEY, G.L., et al., "Neutron gauge calibration comparison of methods", Management of Irrigation and Drainage Systems, Integrated Perspectives, Proc. Nat. Conf. Irrigation and Drainage Engineering, Park City, UT, July 21–23, 1993 (ALLEN, R.G., NEALE, C.M.U., Eds.), Am. Soc. Civil Engrs., Ne York (1993) 1136–1144.

DICKEY, G.L., et al., "Soil bulk density sampling for neutron gauge calibration", Management of Irrigation and Drainage Systems, Integrated Perspectives Proc. Nat. Conf. Irrigation and Drainage Engineering, Park City, UT, July 21–23, 1993 (ALLEN, R.G., NEALE, C.M.U., Eds.) Am. Soc. Civil Engr., Ne York (1993) 1103–1111.

ELDER, A.N., RASMUSSEN, T.C., Neutron probe calibration in unsaturated Tuff, Soil Sci. Soc. Am. J. **58** (1994) 1301–1307.

EVETT, S.R., et al., "Evapotranspiration by soil water balance using TDR and neutron scattering", Management of Irrigation and Drainage Systems, Irrigation and Drainage Div./ASCE, July 21–23, 1993, Park City, UT, ASCE, New York (1993) 914–921.

EVETT, S.R., STEINER, J.L. Precision of neutron scattering and capacitance type moisture gages based on field calibration, Soil Sci. Soc. Amer. J. **59** (1995) 961–968.

FARAH, S.M., et al., Calibration of soil surface neutron moisture meter, Soil Sci. **138** (1984) 235–239.

GARDNER, W.H., "Water content", Methods of Soil Analysis, Part 1, 2nd Ed. (Klute, A. Ed.), Am. Soc. Agron., Soil Sci. Soc. Am., Madison (1986).

GARDNER, W., KIRKHAM, D., Determination of soil moisture by neutron scattering, Soil Sci. **73** (1952) 391–401.

GLENN, D.M., et al., A retractable, neutron-probe access tube, Agron. J. **72** (1980) 1067–1068.

GORNAT, B., GOLDBERG, D., The relationship between moisture measurements with a neutron probe and soil texture, Soil Sci. **114** (1972) 254–258.

GRANT, D.R., Measurement of soil moisture near the surface using a neutron moisture meter, J. Soil Sci. **26** (1975) 124–129.

GREACEN, E.L., Soil water assessment by the neutron method, CSIRO, East Melbourne (1981)140 pp.

GREACEN, E.L., SCHRALE, G., The effect of bulk density on neutron meter calibration, Aust. J. Soil Res. **14** (1976) 159–169.

GRISMER M.E., et al., Field-scale neutron probe calibration and variance analysis for clay soil, J. Irrig.

Drain. Eng. **121** (1995) 354–362.

HARTGE, K.H., "Production factor water", The Water Requirement of Plants and its Measurement [Produktionsfaktor Wasser. Der Wasserbedarf der Pflanzen und seine Messung], KTBL-Schrift, (1979) 7–16.

HAUSER, V.L., Neutron meter calibration and error control, Trans. ASAE **27** (1984) 722–728.

HAVERKAMP, R.,M., et al., Error analysis in estimating soil water content from neutron probe measurements: 1. Local standpoint, Soil Sci. **137** (1984) 78–90.

HEATHMAN, G.C., "Soil moisture determination using a resonant frequency capacitance probe", Presented at the 1993 International Summer Meeting, ASAE, CSAE, Spokane, WA, June 20–23, Amer. Soc. Agric. Eng., 2950 Niles Rd. St. Joseph (1993).

HERRERA, E., H., WHITE, J., Measuring Soil Moisture in Pecan Orchards, New Mexico State Univ. Coop. Ext. Serv. PH4-205 (1994) 3 pp.

HEWLETT, J.D., et al., Instrumental and soil moisture variance using the neutron-scattering method, Soil Sci. **97** (1964) 19–24.

HODGSON, A.S., CHAN, K.Y., Field calibration of a neutron moisture meter in a cracking grey clay, Irrig. Sci. **8** (1987) 233–244.

HODGSON, A.S., Use of neutron and gamma radiation meters to estimate bulk density and correct for bias of sampling for water content in a swelling clay soil, Aust. J. Soil Res. **26** (1988) 261–268.

HODNETT, M.G., BELL, J.P., Neutron probe standards: transport shields or a large drum of water? Soil Sci. **151** (1991) 113–120.

HOLLAND, D.A., The construction of calibration curves for determining water content from radiation counts. J. Soil Sci. **20** (1969) 132–140.

HOWSE, K.R., A technique for using permanent neutron meter access tubes in cultivated soils, Expl. Agric. **17** (1981) 265–269.

HULSMAN, R.B., The neutron probe and the microcomputer, Soil Sci. **140** (1985) 153–157.

INTERNATIONAL ATOMIC ENERGY AGENCY, International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources, Safety Series No. 115, IAEA, Vienna (1996).

INTERNATIONAL ATOMIC ENERGY AGENCY, Regulations for the Safe Transport of Radioactive Material, Requirements No. ST-1, IAEA, Vienna (1996).

JAYAWARDANE, N.S., Determination of the swelling characteristics of a soil using neutron and gamma density meters, Aust. J. Soil Res. **22** (1984) 389–399.

JAYAWARDANE, N.S., et al., Moisture measurement in a swelling clay soil using neutron moisture meters, Aust. J. Soil Res. **22** (1984) 109–117.

JAYAWARDANE, N.S., et al., "Use of the neutron moisture meter in improved irrigation management of a swelling clay soil under different soil amelioration systems", Conference on Agricultural Engineering, Adelaide, Australia, 24–28 August, 1986, Institution of Engineers, Barton, ACT (1986) 173–175.

JENSEN, J.R., Stratification and neutron probe measurement in the topsoil of a ridged savanna soil, Soil Sci. **156** (1993) 1–9.

JENSEN, J.R., Variability of soil wetness in a ridged savanna soil as investigated with neutron probe, Soil Tech. **7** (1994)127–135.

JOHNSON, A.I., "Methods of measuring soil moisture in the field", Geological Survey Water-Supply Paper 1619-U, USDI (1962).

KAMGAR, A., J.W., Plotsize and sample number for neutron probe measurements in small field trials, Soil Sci. **156** (1993) 213–224.

KARSTEN, J.H.M., et al., A method of predicting the calibration curve for a neutron moisture meter, Agrochemophysica **7** (1975) 49–54.

KARSTEN, J.H.M., VAN DER VYVER, C.J., The use of a neutron moisture meter near the soil surface, Agrochemophysica **11** (1979) 45–49.

KARSTEN, J.H.M., VAN DER VYVER, C.J., The form of the calibration curve of a neutron moisture mete near the soil surface, Comm. Soil Sci. Plant Anal. **13** (1982) 191–196.

KASI, S., et al., "Some considerations for soil moisture gauging with neutrons", Isotope and Radiation Techniques in Soil Physics and Irrigation Studies, IAEA, Vienna (1983) 479–488

KIRDA, C., REICHARDT, K., Comparison of neutron moisture gauges with non-nuclear methods to measure field soil water status, International Agrophysics **6** (1992) 77–87.

KLENKE, J.M., FLINT, A.L., Collimated neutron probe for soil water content measurements, Soil Sci. **55** (1991) 916–923.

LAL R., The effect of soil texture and density on the neutron and density probe calibration for some tropical

soils, Soil Sci. **117** (1974) 183–199.
LAL R., Concentration and size of gravel in relation to neutron moisture and density probe calibration, Soil Sci. **127** (1979) 41–50.
LASCANO, R.J., et al., Field calibration of neutron meters using a two-probe, gamma-density gauge, Soil Sci. **141** (1986) 442–447.
LIN JIABIN, Study on the accuracy of measurement at different depths using the neutron soil moisture meter Jiangsu Agric. Sci. (1996) 42–43.
VAUCLIN, M. et al., Error analysis in estimating soil water content from neutron probe measurements: 2. Spatial standpoint, Soil Sci. **137** (1984) 141–148.
MACKERRON, D.K.L., JEFFERIES, R.A., Access tube location within a simulated potato crop and the measurement of soil moisture with a neutron probe, Plant Soil, **102** (1987) 253–255.
MCDOUGALL, A.J., et al., "Neutron moisture meter calibration equations for soil water assessment in the sugar industry", Proceedings of the Conference of the Australian Soc. Sugar Cane Technologists, Mackay, Queensland, Australia, 30 April – 3 May, 1996, Brisbane (1996)125–130
MCGOWAN, M., WILLIAMS, J.B., The water balance of an agricultural catchment. I. estimation of evaporation from soil water records, J. Soil Sci. **31** (1980) 217–230.
MCKAY, D.J., Acomb, L.J., Neutron moisture probe measurements of fluid displacement during in situ ai sparging, Ground Water Monitoring and Remediation **16** (1996) 86–94.
MCKENZIE, D.C., Field calibration of a neutron-gamma probe in three agriculturally important soils of the lower Macquarie valley, Aust. J. Expl. Agric. **30** (1990) 115–122.
MILLER, B., BUCHAN, G., TDR VS Neutron Probe – How do they compare? Wispas **65** (1996) 2 pp.
MISRA, C., et al., Hydrological properties of a Typic Haplustult measured using a neutron hydroprobe and tensiometers, J. Indian Soc. Soil Sci. **42** (1994) 172–178.
MORGENSCHWEIS, G., LUFT, G., Establishment of soil moisture measurement sites and the calibration of a neutron moisture probe, using the Wallingford Probe IH II as an example [Einrichtung von Bodenfeuchtemessstellen und Kalibrierung einer Neutronensonde am Beispiel der Wallingfordsonde Typ IH II], Deutsche Gewasserkundliche Mitteilungen **125** (1981) 84–92.
MOUTONNET P., et al., "Spatial variability of the neutron characteristics of soils: Effect on the calibration curves of neutron scattering moisture meters" ["Variabilite spatiale des caracteristiques neutroniques d'un sol. Incidence sur la determination des courbes d'etalonnage des humidimetres a neutrons"], Isotope and Radiation Techniques in Soil Physics and Irrigation Studies, IAEA, Vienna (1983) 45–54.
MOUTONNET P., et al., Measuring the spatial variability of soil hydraulic conductivity using an automatic neutron moisture gauge, Soil Sci. Soc. Am. J. **52** (1988) 1521–1526.
MUHAMMAD ABDUR RAB, Accuracy of measurement of soil water by neutron probe, Agric. Mechanization Asia Africa Latin America **14** (1983) 41–44.
NAKAYAMA, F.S., ALLEN, S.G., "Application of neutron soil surface water monitoring for plant establishment", Irrigation and Drainage, Proc. Nat. Conf. Am. Soc. Civil Eng., Irrigation and Drainage Division, Durango, CO, July 11–13, 1990, ASCE, New York (1990) 210–217.
NAKAYAMA, F.S., REGINATO, R.J., Simplifying neutron moisture meter calibration, Soil Sci. **133** (1982),48–52.
NICOLLS, K.D., et al., Gadolinium in soils and its effect on the count rate of the neutron moisture meter, Aust. J. Soil Res. **15** (1977) 287–291.
O'LEARY G.J., INCERTI M., A field comparison of three neutron moisture meters, Aust. J. Expl. Agric. **33** (1993) 59–69.
PARKES, M.E., SIAM, N., Error associated with measurement of soil moisture change by neutron probe, J. Agric. Engng. Res. **24** (1979) 87–93.
PIERPOINT, G. Measuring surface soil moisture with the neutron depth probe and a surface shield, Soil Sci. **101** (1966) 189–192.
PILBEAM, C.J., et al., Analysis of water budgets in semi-arid lands from soil water records, Expl. Agric. **31** (1995) 131–149.
RAHI, G.S., SHIH, S.F., Effect of bulk density on calibration of neutron moisture probe for organic soils, Trans. ASAE **24** (1981) 1230–1233, 1240.
RAMOS, C., et al., Some aspects on the use of the neutron probe in irrigation and evapotranspiration studies, Acta Horticulturae **228** (1988) 73–81.
REGINATO, R.J., NAKAYAMA, F.S., Neutron probe calibration based on plastic transfer standards, Soil Sci. **145** (1988) 381–384.
RUPRECHT, J.K., SCHOFIELD, H.J., In situ neutron moisture meter calibration in lateritic soils, Aust. J. Soil Res. **28** (1990) 153–165.
RUSSELL, K., Soil and water management: Specific experiences with a neutron probe, Farmers' Newslette

141 (1993) 31–34.
SAMMIS, T.W., WEEKS, D.L., Variations in soil moisture under natural vegetation, Hydrol. Water Resources Arizona Southwest **7** (1977) 235–240.

SCHAEKE, B., SCHAEKE, E., Field and laboratory calibration of neutron probes for soil moisture determination in a deep loess-black earth site [Zur Feld- und Laboreichung von Neutronentiefensonden fur Bodenfeuchtigkeitsmessungen auf einem tiefgrundigen Loss-Schwarzerde-Standort], Archiv fur Acker- und Pflanzenbau und Bodenkunde, **23** (1979) 77–87.
SCHINDLER, U., Calibration of the neutron probe for water balance measurements in lysimeters with swellable soil material – a contribution to methodology [Die Kalibrierung der Neutronensonde fur Wasserhaushaltsmessungen in Lysimetern mit quellungsfahigem Bodenmaterial – ein Beitrag zur Methodik], Archiv fur Acker- und Pflanzenbau und Bodenkunde, **24** (1980) 553–559.
SCHMUGGE, T.J., et al., Survey of methods for soil moisture determination, Wate Resour. Res. **16** (1980) 961–979.
SCHOFIELD, T.G., et al., "Comparison of neutron probe and time domain reflectometry techniques of soil moisture analysis", US Dept. of Interior, Bureau of Mines, SP Publication SP-19.94, Minneapolis (1994) 130–142.
SCHUDEL, P., The accuracy of measurements of soil-water content made with a neutron-moisture mete calibrated gravimetrically in the field, J. Hydrol. Netherlands **62** (1983) 355–361.
SCOTTER, D.R., et al., The soil water balance in a fragiaqualf and its effect on pasture growth in Central Ne Zealand, Aust. J. Soil Res. **17** (1979) 455–465.
SHAW, L.Yu, Cruise, J.F., "Time series analysis of soil moisture data", Time Series Methods in Hydrosciences (EL-SHAARAWI, A.H., ESTERBY, S.R., Eds.), Elsevier Scientific Publishing Co., Amsterdam (1982).
SINCLAIR, D.F., WILLIAMS, J., Components of variance involved in estimating soil water content and wate content change using a neutron moisture meter, Aust. J. Soil Res. **17** (1979) 237–247.
SINGHAL, R.M., et al., Investigating soil moisture under Eucalyptus and other species using neutron probe moisture meter, Indian J. Forestry **13** (1990) 199–206.
SOHRABI, T.M., et al., Laboratory calibration of a neutron moisture probe, Am. Soc. Agricl. Engrs., Ne York (1984) 13 pp.
STEWART, G.L., TAYLOR, S.A., Field experience with the neutron scattering method of measuring soil moisture, Soil Sci. **83** (1957) 151–157.
STOCKER, R.V., Calibration of neutron moisture meters on stony soils (note), J. Hydrology New Zealand, **23** (1984) 34–36.
STOCKLE, C.O., HILLER, L.K.. Evaluation of on-farm irrigation scheduling methods for potatoes, Am. Potato J. **71** (1994) 155–164.
STONE, J.F., "Neutron physics considerations in moisture probe design", Irrigation and Drainage, Proc. Nat. Conf. Am. Soc. Civil Engrs., Irrigation and Drainage Division, Durango, CO, July 11–13, 1990, ASCE, New York (1990) pp. 1–8.
STONE, J.F. "Relationship of soil type and chemicals to the calibration of neutron meters", In Irrigation and Drainage, Proc. Nat. Conf. Am. Soc. Civil Engrs., Irrigation and Drainage Division, Durango, CO, July 11–13, 1990, ASCE, New York (1990) 32–38.
STONE, J.F., "Performance factors of neutron moisture probes related to position of source on detector", Management of Irrigation and Drainage Systems, Integrated Perspectives, Proceedings of the National Conference on Irrigation and Drainage Engineering, Park City, UT, July 21–23, 1993 (ALLEN, R.G., NEALE, C.M.U. Eds.) Am. Soc. Civil Engrs., New York (1993). 1128–1135.
STONE, J.F., et al., "The ASCE neutron probe calibration study: Overview", Management of Irrigation and Drainage Systems, Integrated Perspectives Proceedings of the National Conference on Irrigation and Drainage Engineering, Park City, UT, July 21–23, 1993, (ALLEN, R.G., NEALE, C.M.U. Eds.) Am. Soc. Civil Engrs., New York (1993) 1095–1102.
STONE, J.F., et al., Calibration of neutron moisture probes by transfer through laboratory media: II. Stabilit experience, Soil Sci. **160** (1995) 164–175.
STONE, J.F., NOFZIGER, D.L., Calibration of neutron moisture probes by transfer through laboratory media: I. Principles, Soil Sci. **160** (1995) 155–163.
STONE, J.F., WEEKS, D.L., Discussion of precision of evapotranspiration estimates using neutron probe, . Irrig. Drainage Eng. **120** (1994) 989–991
TING, J.C., CHANG, M., Soil-moisture depletion under three southern pine plantations in east Texas, Forest Ecol. Management **12** (1985) 179–193.
TOLLNER, E.W., et al., Estimating the number of soil-water measurement stations required for irrigation

decisions, Appl. Eng. Agric. **7** (1991) 198–204.
TOTH, T., Some methodological problems of neutron soil moisture determination [A neutronos talajnedvesseg meghatarozas nehany modszertani problemaja], Debrecini Agrartudomanyi Egyetem Tudomanyos Kozlemenyei **26** (1986) 253–271.
TROXLER ELECTRONIC LABORATORIES Troxler technical brief: Comparing the Sentry 200-AP and the model 4300 moisture probes, Troxler Electronic Lab., Research Triangle Park, NC (1993).
VACHAUD, G., Comparison of methods of calibration of a neutron probe by gravimetry or neutron-captur model, J. Hydrol. **34** (1977) 343–356.
VAN BAVEL, C.H.M., STIRK, G.B., Soil water measurement with and Am241-Be neutron source and an application to evaporimetry, J. Hydrol. **5** (1967) 40–46.
VAN BAVEL, C.H.M., et al., Soil moisture measurement by neutron moderation, Soil Sci. **82** (1956) 29–41.
VANDERVAERE, J.P., et al., Error analysis in estimating soil water balance of irrigated fields during the EFEDA experiment: 2. Spatial standpoint, J. Hydrol. **156** (1994) 371–388.
VAN DER WESTHUIZEN, M., et al., Evaluation of a gamma-attenuation soil water meter and a neutron-scattering meter for measuring topsoil water content, Agrochemophysica **13** (1981) 25–29.
VAN VUUREN, W.E., et al., "Problems involved in soil moisture determinations by means of a neutron depth probe", Recent Investigations in the Zone of Aeration, Volume I, German Federal Republic, Munich (1984) 271–280.
VAUCLIN, M., et al., "Analysis of errors associated with use of the neutron moisture meter" [" Analuse des erreurs liees a l'utilisation de l'humidimetre neutronique"], Isotope and Radiation Techniques in Soil Physics and Irrigation Studies, IAEA, Vienna (1983) 533–549.
VAUCLIN, M., et al., Error analysis in estimating soil water content from neutron probe measurements: 2 Spatial standpoint, Soil Sci. **137** (1983) 141–148.
WATT, J.P.C., JACKSON, R.J., Neutron Probe Access Tubes: Equipment and Procedure for Installation, Scientific Report, New Zealand Soil Bureau, City (1981) 20 pp.
WAUGH, W.J., et al., Calibration precision of capacitance and neutron soil water content gauges in arid soils, Arid Soil Res. Rehab. **10** (1996) 391–401.
WELLS, R.D., ALLEN, R.G., "Practical approaches used in neutron meter moisture monitoring", Irrigation and Drainage, Proc. Nat. Conf. Am. Soc. Civil Engrs., Irrigation and Drainage Division, Durango, CO, July 11–13, 1990 Publisher, City (1990) 218–225.
WHITE, R.E., et al., Sustainability and productivity of perennial and annual pastures in the high rainfall zone of southeastern Australia, Aust. J. Agricl. Res. (submitted) (1999).
WILLIAMSON, R.J., TURNER, A.K., Calibration of a neutron moisture meter fo catchment hydrology, Aust. J. Soil Res. **18** (1980) 1–11.
WILSON, D.J., "The effect of various soil parameters on the interpretation of neutron moisture mete measurements", Hydrology and Water Resources Symposium, Barton, A.C.T., (1985) 166–170.
WILSON, D.J., Neutron moisture meters: the minimum error in the derived water densit Aust. J. Soil Res. **26** (1988) 97–104.
WILSON, D.J. Uncertainties in the measurement of soil water content caused by abrupt soil layer changes, when using a neutron probe, Aust. J. Soil Res. **26** (1988) 7–96.
WILSON, D.J., RITCHIE, A.I.M., Neutron moisture meters: the dependence of their response on soil parameters, Aust. J. Soil Res. **24** (1986) 11–23.
WRIGHT, J.L., "Comparison of ET measured with neutron moisture meters and weighing lysimeters", Irrigation and Drainage, Proc. Nat. Conf. Am. Soc. Civil Engrs., Irrigation and Drainage Division, Durango, CO, July 11–13, 1990, ASCE, New York (1990) 202–209.
YOO, K.H., et al., Soil-water content changes under three tillage systems used for cotton, J. Sustainable Agric. **7** (1995) 53–61.
ZEGELIN, S.J., et al., Improved field probes for soil water content and electrical conductivity measurement using time domain reflectometry, Water Resour. Res. **25** (1989) 2367–2376.