

References

- Abou EL Nasr, H.M., Kandil, H.M., EL Kerdawy., Khamis, H.S. and El Shaer, H.M., 1996. Value of processed saltbush and *acacia* shrubs as sheep fodders under the arid conditions of Egypt. *Small Rumin. Res.* 24, 15-20.
- AFRC (1998). Technical Committee on Response to Nutrients, Report No. 10. The Nutrition of Goats. *Nutr. Abstr. Rev., Series B* 62 no. 11. Wallingford, UK; CAB International.
- Aganga, A.A., Mthetho, J.K. and Tshwenyane, S., 2003. *Atriplex nummularia* (Old Man Saltbush) : A Potential forage crop for arid regions of Botswana. *Pak. J. Nutr.* 2, 72-75.
- Ahn, J.H., Robertson, B.M., Elliot, R., Gutteridge, R.C. and Ford, C.W., 1989. Quality assessment of tropical browse legumes: Tannin content and protein degradation. *Anim. Feed Sci. Technol.* 27, 147-156.
- Alam, M.R., Poppi, D.P. and Sykes, A.R., 1983. Intake, digestibility and retention time of two forages by kids and lambs. *Proc. N.Z. Soc. Anim. Prod.* 45, 107-111.
- Alcaide, E.M., Garcia, M.A. and Aguilera, J.F., 1997. The voluntary intake and rumen digestion by grazing goats and sheep of a low-quality pasture from a semi-arid land. *Livestock Prod. Sci.* 52, 39-47.
- Allden, W.G., Whittaker and McDonald, I.A., 1970. The determinants of herbage intake by grazing sheep: the interrelationship of factors influencing herbage intake and availability. *Aust. J. Agric. Res.* 21, 755-766.

- AOAC, 2000. Official methods of analysis (15th ed.). Association of Official Analytical Chemists, Inc., Arlington. Virginia, USA.
- ARC, 1980. The nutrient requirements of ruminant livestock. Technical Review by an Agricultural Research Council working party, Commonwealth Agriculture Bureau, Farnham Royal, UK.
- Arnold, G.W., 1962. Harness for the total collection of faeces from grazing wether sheep. *Anim. Prod.* 2, 169 – 173.
- Arnold, G.W., 1966. The special senses in grazing animals: 1. Sight and dietary habits in sheep. *Aust. J. Agric. Res.* 17, 521-529.
- Arnold, G.W., 1970. Regulation of food intake in grazing ruminants. In: *Physiology of Digestion and Metabolism in the Ruminant*. Ed. Phillipson, A.T., Oriel Press, Newcastle, pp. 264-276.
- Arnold, G.W., De Boer, E.S. and Boundy, C.A.P., 1980. The influence of odor and taste on the food preferences and food intake of sheep. *Aust. J. Agric. Res.* 31, 489-509.
- Baker, R.D., Young, N.E. and Laws, J.A., 1985. Changes in the body composition of cattle exhibiting compensatory growth and the modifying effects of grazing management. *Anim. Prod.* 41, 309-321.
- Bath, D.L., Wier, W.C. and Torrel, D.T., 1956. The use of the oesophageal fistula for the determination of consumption and digestibility of pasture forage for sheep. *J. Anim. Sci.* 15, 1166-1174.
- Baile, C.A. and Martin, F.H., 1972. Effect of local anesthetic on taste and feed intake. *J. Dairy Sci.* 55, 1461-1463.

- Bazeley, D.R. and Ensor, C.V., 1989. Discrimination learning in sheep with cues varying in brightness and hue. *Appl. Anim. Behav. Sci.* 23, 293-299.
- Bell, F.R. and Sly, J., 1983. The olfactory detection of sodium and lithium salts by sodium-deficient cattle. *Physiol. Behav.* 31, 307-313.
- Ben Salem, H., Nefsaoui, A. and Ben Salem, L., 2004. Spineless cactus (*Opuntia ficus indica* f. *inermis*) and oldman saltbush (*Atriplex nummularia* L.) as alternative supplements for growing Barbarine lambs given straw-based diets. *Small Rumin. Res.* 51, 65-73.
- Burns, J.C., Pond, K.R. and Fisher, D.S., 1994. Measurement of forage intake. In: *Forage Quality, Evaluation, and Utilization*. Ed. Fahey, G.C., National Conference of Forage Quality, Evaluation, and Utilization. University of Nebraska, Lincoln. pp. 495-532.
- Campling, R.C., 1966. A preliminary study of the effect of pregnancy and of lactation on the voluntary intake of food by cows. *Br. J. Nutr.* 20, 25-39.
- Casson, T., Warren, B.E., Schleuter, K. and Parker, K., 1996. On farm sheep production from sheep pastures. *Proc. Austr. Soc. Anim. Prod.* 21, 173-176.
- Chriyaa, A., Moore, K.J. and Waller, S.S., 1997. Browse foliage and annual legume pods as supplements to wheat straw for sheep. *Anim. Feed Sci. Technol.* 62, 85-96.

- Collins, H.A. and Nicol, A.M., 1986. The consequences for feed dry matter intake of grazing sheep, cattle and goats to the same residual herbage mass. Proc. New Zealand Soc. Anim. Prod. 46, 125-128.
- Conrad, H.R., Pratt, A.D. and Hibbs, J.W., 1964. Regulation of feed intake in dairy cows. J. Dairy Sci. 47, 54-62.
- Cook, C.W., Thorne, J.L., Blake, J.T. and Edlefsen, J., 1958. The use of an oesophageal fistula cannula for collecting samples by grazing sheep. J. Anim. Sci. 17. 189-193.
- Dalley, D.E., Isherwood, P., Sykes, A.R. and Robson, A.B., 1997. Effect of *in vitro* manipulation of pH on magnesium solubility in ruminal and caecal digesta in sheep. J. Agric. Sci. 129, 107-112.
- De Jager, J.M., 1993 Geographical and agro-ecological features of South Africa. In: Livestock Production Systems. Principles and Practice. Eds. Maree, C. and Casey, N.H. Agri development foundation. pp 14.
- De Kock, G.C., 1967. Droogtevoergewasse. Hand. Weidingsver. S. Afr. 2, 147-156.
- De Kock, G.C., 1980. Drought resistant fodder shrub crops in South Africa. In Browse in Africa. Ed. Le Houerou, H.N., Symp. On Browse in Africa. Addis Ababa, Ethiopia, 1980.
- De Waal, H.O., Engels, E.A.N. and Biel, L.C., 1983. A note on the insertion of rumen cannulae in pregnant ewes. S. Afr. J. Anim. Sci. 73: 264 – 265.

- Domingue, B.M.F., Dellow, D.W. and Barry, T.N., 1991. Voluntary intake and rumen digestion of low quality roughage by goats and sheep. *J. Agric. Sci.* 117, 111-120.
- Draz, O., 1983. Rangeland conservation and development. *World Anim. Rev.*, 47, 2-6.
- Du Toit, P.C.V., 2001. Waarom presteer kleinvee oënskynlik swak op oumansoutbos in die Karoo? *Dorper Nuus* 60, 66-70.
- EAAP, 1991. Goat nutrition. Publication no. 45. Ed. Monrand-Fehr, P., Pudoc Wageningen.
- El Aich, A., 1987. Fodder trees and shrubs in range and farming systems in North Africa. Food and Agricultural (FAO) report. Rome.
- El Hag, G.A., 1976. A comparative study between desert goat and sheep efficiency of feed utilization. *World Rev. Anim. Prod.* 12, 43-48.
- El Shaer, H.M., Fahmy, A.A., Abdul-Aziz, G.M., Shalaby, A.S. and Abd El Gawad, A.M., 2000. Utilization of less and unpalatable halophytes as nonconventional feeds for sheep under the arid conditions in Egypt. Proceedings of the 3rd All Africa conference on Animal Agriculture and 11th conference of Egyptian society of Animal Production. Alexandria, Egypt 6-9 November 2000, 109-115.
- Emmans, G.C., 1997. A method to predict the food intake of domestic animals from birth to maturity as a function of time. *J. Theoret. Biol.* 186, 189-199.

- Engels, E.A.N. and Malan, A., 1978. Die invloed van twee veebeladings op die samestelling van die dieet en inname van skape in 'n driekamp stelsel in die sentrale Oranje-Vrystaat. S.Afr. Tydskr. Veek. 8(1), 19-28.
- Engels, E.A.N., De Waal, H.O., Biel. L.C. and Malan, A., 1981. Practical implications of the effect of drying and treatment on nitrogen content and *in vitro* digestibility of samples collected by oesophageally fistulated animals. S. Afr. J. Anim. Sci. 11, 247-254.
- Engels, E.A.N and Van der Merwe, F.J., 1967. Application of an *in vitro* technique to South African forages with special reference to the effect of certain factors on the results. S. Afr. J. Anim. Sci. 10, 983 – 995.
- Forbes, J.M., 1995. Voluntary food intake and diet selection in farm animals. CAB International, Wallingford, UK.
- Forbes, J.M., 1998. Dietary awareness. Appl. Anim. Beh. Sci. 57, 287-297.
- Forbes, J.M., 1999. Minimal total discomfort as a concept for the control of food intake and selection. Appetite 33, 371-378.
- Forbes, J.M. and Mayes, R.W., 2002. Food choice. In 'Sheep Nutrition'. Eds. Freer, M., Dove, H., CSIRO Publishing: Collinwood, Vic. pp 51-69.
- French, H.M., 1970. Observations of the goat. FAO Agricultural Studies No. 80. FAO Animal Production and Health Series No. 14. Rome, Italy; Food and Agriculture Organization of the United Nations.
- Gentry, A.W., 1978. In: Evolution of African Mammals. Eds. Maglio, V.J., Cooke, H.B.S., London, UK; Harvard University Press, pp. 536-551.

- Gibb, M.J. and Baker, R.D., 1991. Compensatory growth and body composition changes in grazing steers following silage feeding without or with supplementation of fish meal and monensin. *Anim. Prod.* 52, 237-247.
- Gill, D.R., Owens, F.N. and Hicks, R.B., 1986. Impact of feed intake on performance of grazing and feedlot cattle. *Symposium Proceedings: Feed Intake by Beef Cattle. Oklahoma Agricultural Experimental Station Misc. Publ.* 121,360-368.
- Goodin, J.R., 1979. *Atriplex* as a forage crop for arid lands. In: *New Agricultural Crops*. Ed. Ritchie, D.E. 1979.
- Grant, S.A., Bolton, G.R. and Russel, A.J.F., 1984. The utilization of sown and indigenous plant species by sheep and goats grazing hill pastures. *Grass For. Sci.* 39, 361-370.
- Grill, H.J. and Berridge, K.C., 1985. Taste reactivity as a measure of the neural control of palatability. *Prog. Psychobiol. Phys. Psych.* 11, 1-61.
- Grovum, W.L. and Chapman, H.W., 1988. Factors affecting the voluntary intake of feed by sheep. 4. The effect of additives representing the primary tastes on sham intakes by oesophageally fistulated sheep. *Brit. J. Nutr.* 59, 63-72.
- Goatcher, W.D. and Church, D.C., 1970. Review of some nutritional aspects of the sense of taste. *J. Anim. Sci.* 31, 973-981.
- Gorden, C.M., 1978. The animal-plant complex in forage palatability phenomena. *J. Anim. Sci.* 46, 1471-1477.

- Hadjipanayiotou, M. and Antoniou, T., 1983. A comparison of rumen fermentation patterns in sheep and goats given a variety of diets. *J. Agric. Food Sci.* 34, 1319-1322.
- Hafez, E.S.E., 1975. *The behavior of domestic animals*. 3rd Edition. London, UK; Bailliere Tindall.
- Heady, H.F., 1964. Palatability of herbage and animal preferences. *J. Range Manage.* 17, 76-82.
- Hicks, B., Owen, F. and Gill, D., 1986. Feed intake of beeflot beef steers: Impact of initial weight and time on feed. Symposium proceedings: Feed Intake by Beef Cattle. Oklahoma Agricultural Experimental Station Misc. Publ. 121, 238-266.
- Hobson, V., Grobbelaar, P.D., Wentzel, D. and Koen, A., 1986. Effect of angora ewes grazing *Atriplex nummularia* (Oldman saltbush). *S. Afr. J. Anim. Sci.* 16, 95-96.
- Hodgson, J., 1996. Grazing behavior and herbage intake. In: *Grazing*. Ed. Frame, J., British Grassland Society Occasional Symposium 19, 51-77.
- Hodgson, J., Fornes, T.D.A., Armstrong, R.H., Beattie, M.M. and Hunter, E.A., 1991. Comparative studies of the ingestive behavior and herbage intake of sheep and cattle grazing indigenous hill plant communities. *J. Appl. Ecol.* 28, 205-227.
- Hoon, J.H., King, P.R. and King, B.R., 1991. Die effek van brakwater op die inname van oumansoutbos (*A. nummularia*). *Karoo Agric* Vol 4, no 3, 6-8.

- Hopkins, D.L. and Nicholson A., 1999. Meat quality of wether lambs grazed on saltbush (*A. nummularia*) plus supplements of Lucerne (*Medicago sativa*). *Meat Sci.* 51, 91-95.
- Hovell, F.D.D. and Greenhalgh, J.F.D., 1978. The utilization of diets containing acetate, propionate or butyrate salts by growing lambs. *Brit. J. Nutr.* 40, 171-182.
- Huston, J.E., 1978. Forage utilization and nutrient requirements of the goat. *J. Dairy Sci.* 61, 988-993.
- Illijs, A.W., 1998. Advances and retreats in specifying the constraints on intake on grazing ruminants. In: Proceedings of xviii International Grassland Congress Vol III. Eds. Buchanan-Smit, J.G., Bailey, L. and McCaughey, P., Association Management Centre, Calgary, pp. 39-44.
- Invarlsen, K.L., Andersen, H.R. and Foldager, J., 1992. Effect of sex and pregnancy on feed intake capacity of growing cattle. *Acta Agriculturae Scandinavica, Section A, Anim. Sci.* 42, 40-46.
- Jacobs, G.A. and Smit, C.J., 1977. Benutting van vier *Atriplex* spesies deur skape. *Agroanimalia* 9, 37-43.
- Johnson, C.L., Helliwells, S.H. and Aubrey Jones, D.A., 1988. Magnesium metabolism in the rumens of lactating dairy cows fed on spring grass. *Quarterly J. Exp. Phys.* 73, 23-31.
- Jones, R. and Forbes, J.M., 1984. A note on the effects of glyphosphate and quinine on the palatability of hay for sheep. *Anim. Prod.* 38, 301-303.

- Jones, R. and Hodginson, K.C., 1969. Root growth of Rangeland Chenopods. In: The Biology of *Atriplex*. Ed. Jones, R., C.S.I.R.O. Div. Plant Industry. Canberra. Australia.
- Jung, H.G. and Allen, M.S., 1995. Characteristics of plant cell walls affecting intake and digestibility of forages by ruminants. *J. Anim. Sci.* 73, 2774-2790.
- Langlands, J.P., 1975. Techniques for estimating nutrient intake and its utilization by the grazing ruminant. In: Digestion and Metabolism in the Ruminant. Eds. McDonald, I.W. and Warner, A.C.I., University of New England Publishing Unit, Armidale, N.S.W., Australia. pp 326-332.
- Lesperance, A.L., Bohman, V.R. and Marble, D.W., 1960. Development of techniques for evaluating grazed forage. *J. Dairy Sci.* 43, 683-689.
- Le Houerou, H.N., 1980. Browse in Northern Africa. In: Browse in Africa, the Current State of Knowledge. Ed. Le Houerou, H.N. Paris: UNESCO. pp 55-82.
- Le Houerou, H.N., 1991. Feeding shrubs to sheep: Intake performance and feed value. Proc. IVth Int. Rangeland Congr., Montpellier, France.
- Lindberg, J.E., 1988. Influence of cutting time and N fertilization on the nutritive value of timothy. *Swed. J. Agric. Res.* 18, 85-89.
- Louca, A., Antoniou, T. and Hadjipanayiotou, M., 1982. Comparative digestibility of feedstuffs by various ruminants, specifically goats, p. 112-127. 3rd International Conference on Goat Production and Disease. Tucson, Arizona (USA).

- Lu, C.D., 1988. Grazing behavior and diet selection of goats. *Small Rumin. Res.* 1, 205-216.
- Maddison, S. and Baldwin, B.A., 1983. Diencephalic neuronal activity during acquisition and ingestion of food in sheep. *Brain Res.* 278, 195-206.
- Malan, P., 2000. Selection and propagation of elite *Atriplex* material. MSc. Agric. dissertation. University of Pretoria, South Africa.
- Marten, G.C., 1969. Measurement and significance of forage palatability. Proc. National Conf. Forage Quality Eval. and Util., Nebraska Center Cont. Educ., Lincoln, NE: D-1 to D-55.
- Marten, G.C., 1973. Alkaloids in reed canarygrass. In: *Anti-quality Components of forages*. Ed. Matches, A.G. Crop Sci. Soc. Amer. Special Pub. No. 4., Madison, WI. Pp. 15-31.
- Marten, G.C., 1978, The animal-plant complex in forage palatability. *J. Anim. Sci.* 46, 1470-1477.
- Marten, G.C. and Jordan, R.M., 1974. Significance of palatability differences among *Phalaris arundinacea* L., *Bromus inermis* Leyss., and *Dactylis glomerata* L. grazed by sheep. Proc. 12th Intern. Grassl. Cong., Moscow, U.S.S.R., Vol. 3, Part I, 305-312.
- Martin, R.J., Beverly, T. and Truett, G.E., 1989. Energy balance regulation. In: *Animal Growth Regulation*. Eds. Campion, D., Hausman, D. and Martin, R., Plenum Press, New York, USA. pp. 211-235.

- Masson, C., Kirilov, D., Faurie, F. and Tisserand, J.L., 1989. Comparaison des activités alimentaires et méryciques d'ovins et de caprins recevant de la paille d'orge traitée ou non a la soude (Feeding behavior and rumination in sheep and goats fed with hydroxide treated or untreated barley straw). *Ann. Zootech.* 38, 73-82.
- Masters, D.G., Norman, H.C. and Dynes, R.A., 2001. Opportunities and limitations for animal production from saline land. *Asian Aust. J. Anim. Sci.* 14, 199-211.
- Mathis, C.P., Cochran, R.C., Vanzant, E.S., Abdelgadir, I.E.O., Heldt, J.S., Olson, K.C., Johnson, D.E., Caton, J., Faulkner, D., Horn, G., Paisley, S., Mass, P., Moore, K. and Halgerson, J., 2001. A collaborative study comparing an in situ protocol with single time-point enzyme assays for estimating ruminal protein degradability of different forages. *Anim. Feed Sci.* 93, 31-42.
- McDonald, P., Edwards, R.A., Greenhalgh, J.F.D. and Morgan, C.A., 1995. *Animal Nutrition* (5th Ed.). Prentice Hall, Edinburgh Gate, Harlow pp.418-439.
- McLaughlin, C.L., Baldwin, B.A. and Baile, C.A., 1974. Olfactory bulbectomy and feeding behavior. *J. Anim. Sci.* 39, 136-143.
- Meissner, H.H., Van Niekerk, W.A., Spreeth, E.B. and Koster, H.H., 1989. Voluntary intake of several planted pastures by sheep and an assessment of NDF and IVDOM as possible predictors of intake. *J. Grassl. Soc. S. Afr.* 6, 156-162.

- Minson, D.J., 1982. Effects of chemical and physical composition of herbage eaten upon intake. In: Nutritional Limits in Animal Production from Pastures. Ed. Hacker, J.B., C.A.B. Farnham Royal.
- Minson, D.J., 1990. Forage in Ruminant Nutrition. Academic Press, San Diego, California, USA.
- Mohammed, H.H. and Owen, E., 1982. Goats versus sheep: Effect of coat thickness and body composition on maintenance energy requirement. Anim. Prod. 43, 391-398.
- Ndosa, J.E.M., 1980. A comparative study of roughage utilization by sheep and goats. Trop. Anim. Prod. 3, 62-68.
- Newman, J.A., Parsons, A.J. and Penning, P.D., 1994. A note on the behavioural strategies used by grazing animals to alter their intake rate. Grass For. Sci. 49, 502-505.
- Norman, H.C., Friend, C., Masters, D.G., Rintoul, A.J., Dynes, R.A. and Williams, I.H., 2004. Variation within and between two saltbush species in plant composition and subsequent selection by sheep. Aust. J. Agric. Res. 55, 999-1007.
- NRC, 1981. Nutrient requirements of domestic animals. No. 15. Nutrient requirements of goats. Angora, dairy and meat goat in temperate and tropical countries. National Academy of Sciences, Washington D.C, USA.
- NRC, 1985. Nutrient requirements of domestic animals. Nutrient requirements of sheep, 6th Revised Edition. National Academy of Sciences, Washington D.C, USA.

- Orskov, E.R. and MacDonald, P., 1979. The estimation of protein degradability in the rumen from incubation measurements weighted according to rate of passage. *J. Agric. Sci.* 92, 499 – 503.
- Orskov, E.R., 1982. Biological and chemical analytical methods. In: *FAO Animal Production and Health paper*. Ed. Preston, T.R. University of Agriculture and Forestry, Ho Chi Minh city, Viet Nam.
- Pfister, J.A., Muller-Schwarze, and D., Balph, D.F., 1990. Effect of predator fecal odors on feed selection by sheep and cattle. *J. Chem. Ecol.* 16, 323-329.
- Reid, R.L., Jung, G.A. and Thanye, W.A., 1988. Relationships between nutritive quality and fibre components of cool season and warm season forages. *J. Anim. Sci.* 66, 1275-1291.
- Rittner, U. and Reed, J.D., 1992. Phenolics and *in vitro* degradability of protein and fibre in west African browse. *J. Sci. Food Agric.* 58, 21-28.
- Robertson, J.B. and Van Soest, P.J., 1981. *The Analysis of Dietary Fibre in Food*. Eds. James, W.P.T and Theander, O. Dekker, New York.
- Romney, D.L., Sendalo, D.S.C., Owen, E., Mtenga, L.A., Penning, P.D., Mayes, R.W. and Hendy, C.R.C., 1996. Effects of tethering management on feed intake and behavior of Tanzanian goats. *Small Rumin. Res.* 19, 113-120.
- Russel, A.J.F., Maxwell, T.J., Bolton, G.R., Currie, D.C. and White, I.R., 1983. A note on the possible use of goats in hill sheep grazing systems. *Anim. Prod.* 36, 313-316.
- Samuels, M.L., 1989. *Statistics for the life sciences*. Collier MacMillan Publishers, London.

- Satter, L.P. and Roffler, R.E., 1977. influence of nitrogen and carbohydrate inputs of rumen fermentation. Ch.3. In: Recent Advances in Animal Nutrition. Eds. Haresign, D. and Lewis, M., Butterwoths, London.
- Sparks, C.F., 2003. Interspecies variation in nutritive value of certain drought tolerant fodder shrubs. M.Sc. Agric. dissertation, University of Pretoria, South Africa.
- Statistical Analysis Systems, 1994. SAS User's Guide: Statistics Version 6. SAS Institute Inc. Cary, NC., USA.
- Steynberg, H. and De Kock, G.C., 1987. Aangeplante weidings in die veeproduksiestelsel van die Karoo en ariede gebiede. Karoo Agric 3, 10.
- Stobbs, T.H., 1973. The effect of plant structure on the intake of tropical pastures. Aust. J. Agric. Res. 24, 809-819.
- Tan, C.M., Poppi, D.P. and Sykes, A.R., 1987. Comparative aspects of rumen digestion in sheep and goats offered barley hay. In: Proceedings 4th AAAP Animal Science Congress, New Zealand, Reardon, Eds., T.F., Adam, J.L., Camcbell, A.G. and Sumner, R.M.W., pp. 345-353.
- Tainton, N.M., 1999. Veld management in South Africa. University of Natal Press, Pietermaritzburg.
- Teller, E., Vanbelle, M. and Kamatali, P., 1993. Chewing behaviour and voluntary grass silage intake by cattle. Livest. Prod. Sci. 33, 215-227.
- Terry, R.A., Tilley, J.M. and Outen, G.A., 1969. Effect of pH on cellulose digestion under *in vitro* conditions. J. Sci. Food Agric. 20, 317-320.

- Tilley, J.M.A. and Terry, R.A., 1963. A two-stage technique for the *in vitro* digestion of forage crops. J. Br. Grassl. Soc. 18, 104-115.
- Torrel, D.T., 1954. An oesophageal fistula for animal nutrition studies. J. Anim. Sci., 13: 878-885.
- Tribe, D.E., 1949. The importance of the sense of smell to the grazing sheep. J. Agric. Sci. 39, 309-312.
- Underwood, E.J. and Suttle, N.F., 1999. The Mineral Nutrition of Livestock. 3rd ed. CABI.
- Van Niekerk, W.A., 1997. Inname en parsieële verteerbaarheid van 'n aantal weidings gewasse deur skape en die gebruik van enkele kwaliteits parameters om inname te voorspel. PhD thesis. University of Pretoria. South Africa.
- Van Niekerk, W.A., Sparks, C.F., Rethman, N.F.G. and Coertze, R.J., 2004a. Mineral composition of certain *Atriplex* species and *Cassia sturtii*. S. Afr. J. Anim. Sci. 34 (Suppl. 1), 105-107.
- Van Niekerk, W.A., Sparks, C.F., Rethman, N.F.G. and Coertze, R.J., 2004b. Qualitative characteristics of some *Atriplex* species and *Cassia sturtii* at two sites in South Africa. S. Afr. J. Anim. Sci. 34 (Suppl. 1), 108-109.
- Van Soest, P.J., 1982. Nutritional ecology of the ruminant. Corvallis, Oregon, USA; O and B Books Inc.

- Van Soest, P.J., 1984. Chemical procedures for estimating nutritive value. Section 3. In: Laboratory Evaluation of Fibrous Feeds. Ed. J.E. Knipfel. Swift current Research station: Sadkatchewan.
- Van Soest, P.J., Wine, R.H. and Moore, L.A., 1966. Estimation of the true digestibility of forages by the *in vitro* digestion of cell walls. Proceedings of the 10th International Grassland Congress., Helsinki, 1966, p. 438.
- Verschoor, A., 1992. Die moontlike rol van oumansoutbos (*A. nummularia* Lindl.) as weigewas in hoë reënvalgebiede. M.Sc. Agric. dissertation, University of Pretoria, South Africa.
- Vogel, A.I., 1961. A Textbook of Quantitative Inorganic Analysis. Third edition, p 77-78; 258 and 266.
- Watson, M.C. and O'Leary, W.O., 1993. Performance of *Atriplex* species in the San Joaquin valley, California, under irrigation and with mechanical harvests. Agriculture, Ecosystems and Environment 43, 255-266.
- Watson, M.C., O'Leary, W.O. and Glenn, E.P., 1987. Evaluation of *Atriplex lentiformis* (Torr.) S. Wats. and *Atriplex nummularia* Lindl. as irrigated forage crops. J. Arid Environ. 13, 293-303.
- Welch, B.L. and Monsen, S.B., 1981. Winter crude protein among accessions of fourwing saltbush grown in a uniform garden. Great Basin Nat. 41, 343-346.
- Weston, R.H., Hogan, J.P. and Hemsley, J.A., 1970. Some aspects of the digestion of *A. nummularia* (Saltbush) by sheep. Proc. Austr. Soc. Anim. Prod. 512-521.

Wilson, A.D., 1966. The value of *Atriplex* (Saltbush) and *Kochia* (Bluebush) species as food for sheep. Austr. J. Agric. Res. 17, 147-153.

Wilson, A.D., 1977. The digestibility and voluntary intake of leaves of trees and shrubs by sheep and goats. Austr. J. Agric. Res. 28, 501-508.

Wilson, J.R. and Kennedy, P.M., 1996. Plant and animal constraints to voluntary feed intake associated with fibre characteristics and particle breakdown and passage in ruminants. Austr. J. Agric. Res. 47, 199-225.