

LITERATURE CITED

- Abd El- Latif, I.I. and G.G. D. Salama. 1982. Response of barley to levels of nitrogen and phosphorous under sandy soil conditions. Annals of Agric. Sci. Moshotohor 18 : 37-45.**
- Abu-Sharar, T.M; N. Abu - Rub and T. Al-Ashhab 1991. Rainfall amount and distribution in relation to cereal response to fertilizers. Fertilizer Use Efficiency under Rain-fed Agriculture in West Asia and North Africa. Proc. of the Fourth Regional Workshop 5-10 May. Agadir, Morocco. 273-281.**
- Adamu Molla. 1991. Effect of preceding crops and N-P fertilizer on barley yield in Northeastern Ethiopia. Rachis 10 (2) : 33-34.**
- Assey, A.A.; M.E. Saleh; I.E. Ramadan; A.A. El-Sayed and A.M. El-Bawab. 1990. Effect of irrigation and application nitrogen on barley. Zagazig. J. Agric. Res. 17 No 3 (A) : 613-622.**
- Azabi, R. 1991. A review of fertilizer studies of dryland wheat and barley in Libya. Fertilizer Use Efficiency under Rain-fed Agriculture in West Asia and North Africa. Proc. of the Fouth Regional Workshop 5-10 May. Agadir, Morocco. 259-266.**

- Bitney, L.; J.Ryan; M. Abdel Monem and M. Moussaoui. 1991.** A comparison of maximum yield and maximum net revenue with nitrogen fertilizer on barley in Morocco. Fertilizer Use Efficiency under Rain-fed Agriculture in West Asia and North Africa. Proc. of the Fourth Regional Workshop 5-10 May. Agadir, Morocco. 246-255.
- Carleton, M.M. 1916.** The small grains. In Barley. Agronomy Monograph No 26, Madison, WI, USA. The Macmillan Co., New York. 522pp.
- Chandnani, J.J. 1954.** Manuring of barley. Indian J. Agric. Sci. 24: 195-211.
- Chowdhary, R.K.; K.N. Singh and M. Parshad 1971.** Relative response to nitrogen and phosphorous fertilization and its economics on irrigated and rainfed barley. Indian J. Agron. XVI (4) : 505-510.
- Cooper, P.J.M. 1983.** Crop management in rainfed agriculture with special reference to water use efficiency. In Proc. of the 17th Colloquium of the International Potash Institute, Rabbat, Morocco, May. 19-35.
- Cooper, P.J.M.; P.J. Gregory; D. Tully and H.C. Harris. 1987.** Improving water use efficiency of annual crops in the rainfed farming system of West Asia and North Africa. Expl Agric 23 : 113-158.

- Dahama, A.K. 1991.** Response of barley (*Hordeum vulgare L.*) varieties to nitrogen under rainfed conditions. *Indian J. Agron.* 36: 263-264.
- El-Sayed, A.A. and M.M. Noaman. 1992.** Improving water use efficiency of barley in rainfed areas of Egypt using some cultural practices. *Egypt. J. Appl. Sci.*, 7 (6): 284-298.
- El-Sayed, A.A.; M.M. Noaman and A. El-Rayes 1991.** Water requirements of barley in sandy soil I. Effect of flood irrigation frequency and nitrogen fertilizer rate on growth and yield attributes. *Egypt J. Appl. Sci.*, 6 (12) : 210-218.
- Gaid, M. 1991.** Rain-fed cereal fertilization in Algeria. *Fertilizer Use Efficiency under Rain-fed Agriculture in West Asia and North Africa. Proc. of the Fourth Regional Workshop 5-10 May. Agadir, Morocco.* 267-272.
- Harmsen, J. and K.D. Shepherd 1983.** Crop response to nitrogen and phosphorous in rainfed agriculture. In colloquium on "Nutrient balances and the need for fertilizers in semi-arid regions". 17th Colloquium of the International Potash. Rabbat, Morocco. 155-177.
- Hartman, M.D. and N. Nyborg. 1989.** Effect of early growing season moisture stress on barley utilization of broadcast-incorporated and deep-banded urea. *Canadian J. of Soil Sci* 69 (2) 381-389.

- Hesse, P.R. 1971.** A text book of soil chemical analysis. John murray
Puplis, London, Great Britain.
- Hooda, R.S. and G.S. Kalra. 1977.** Response of barley varieties to level
of nitrogen under irrigated and unirrigated conditions.
Indian J. Agron. 22 (3) : 153-156.
- Hooda, R.S., and G.S. Kalra. 1981.** Effect of nitrogen on dry matter
production and uptake of nitrogen by barley under
irrigated and rainfed conditions. Agric. Sci. Digest, 1 (3) :
149-151.
- Hussein, M.M. and A.A. Khadr. 1979.** Effect of irrigation and nitorgen
application on growth and yield of barley plants. Egypt. J.
Agron., 4 (2) : 205-219.
- Ivoilov, A.V.; M.I. Sorokin and L.N. Sorokina 1989.** Effect of mineral
fertilizers on barley grain yield and quality in relation to
weather conditions and sowing rate. Agrokhimiya. 8 : 43-
46. (c.f. Field Crop Abst. 45 (4), 250, 1992).
- Jackson, M.L. 1967.** "Soil Chemical Analysis" Prentice. Hall, Inc. Engle
wood Cliffs, N.J.
- Jana, P.K.; K.N. Singh; B.N. Chatterjee, K. Chatterjee and D.Maita.**
1978. Effect of nitrogen and seed rate on the growth ,
yield and malting quality of 2 and 6-row barley varieties.
Indian J. Agron. 23 (1) : 40-43.
- Jha, K.N., S.N. Ojha, and B.D. Singh. 1981.** Response of barley varieties
to level of nitrogen under rain-fed conditions. Indian J.
Agron. 26 (1) : 97.

- Jha, K.P. and B.T.S. Moorthy. 1981.** Note on the performance of some barley varieties on Rain-fed uplands of orissa. *Indian J. Agric. Sci.* 51(7) : 529-530.
- Jones, M. 1989.** Barley rotation trials at Tel Hadya and Breda Stations. A summary of biological yield data, 1981-89. Publication ICARDA-140 (c.f. *Field Crop Abst.* 42 (9),. 837, 1989).
- Khatua, K.B., and K.M. Samal . 1978.** Response of barley varieties to application of nitrogen under rain-fed conditions. *Indian J. Agron.* 23 (4) : 359-362.
- Lal, K.N. and M.S. Subba Rao. 1951.** A rapid method of leaf area determination. *Nature*, 167: 72.
- Lekes, J. and I. Ziniseva. 1990.** Selection in spring barley with a view of more efficient nitrogen utilization. Gumpenstein, Austria, Bundesanstalt fur Alpenlandische landwirtschaft. 107-114.
- Lawlor D.W.; W. Day; A.E. Johnston; B.J. Legg and K.J. Parkinson. 1981.** Growth of spring barley under drought: Crop development, photosynthesis, dry-matter accumulation and nutrient content. *J. Agric. Sci. Camb.* 96: 167-186.
- Mahey, R.K. and S.S. Cheema. 1986.** NPK uptake by barley as influenced by stored water, irrigation and nitrogen application. *Indian J. of Ecology* 13 (2) : 237-243.
- Mohmoud, M.A.H. 1992.** Effect of sowing dates and time of nitrogen application on some wheat and barley varieties. Ph. D. Thesis, Fac. Agric. Minia Univ.

- Mazid, A. and E. Bailey 1992. Incorporating risk in the economic analysis of agronomic trials : Fertilizer use on barley in Syria. *Agricultural Economics* 7 (2) : 167-184.
- Mechergui, M.; A. Gharbi and S.Lazaar. 1989. The impact of N and P fertilizers impact on root growth, total yield and WUE of rainfed cereals in Tunisia. *Soil and Crop Managment for Improved Water Use Efficiency in Rainfed Areas. Proc. of an International Workshop Ankara, Turkey. 15-19 May.* 153-158.
- Moursi, M.A.; Nemat A. Nour El-Din; Olfat H. El-Bagoury and A.A. El-Sayed. 1983. Water requirement of wheat. I. Effect of soil moisture stress on growth, yield and grain quality. 1st Conf. of Agron., Egypt., Soc. of Crop Sci: 285-302.
- Neate, P.; D. Nygaard and A. Allan. 1982. Response of barley to phosphorous fertilization. *Rachis*. 1: 21-22.
- Nuttall, W.F.; W.K. Dawley; S.S. Malhi and K.E. Bowren. 1989. The effect of spring and fall application of N on yield and quality of barley (*Hordeum vulgare L.*) and rapeseed (*Brassica campestris L.*). *Canadian J. Soil Sci.* 69 (2) : 199-211.
- Orphanos, P.I. 1987. Direct and residual effect of fertilizer phosphorous on barley in Cyprus. Publication, ICARDA, International Center for Agric. Res. in the Dry Areas, Syria 120: 44-49.

- Sakkal, R. and A. Sukkar 1983.** Reactions of some barley and durum varieties to split nitrogen application. *Rachis* 2 : 12-13.
- Shepherd, K.D.; P.J. M. Cooper; A.Y. Allany; D.S.H. Drennan and J.D.H. Keatinge. 1987.** Growth, water use and yield of barley in Mediterranean-type environments. *J. Agric. Sci., U.K.* 108 (2) : 365-378.
- Singh, B.P. and B. Prakash. 1982.** Relative performance of barley varieites and wheat (Kalyansona) to varying levels of nitrogen on Aridisols. *Indian J. Agron.* 27 (2) : 480-481.
- Singh, K. N. and B.N. Misra. 1980.** Advancing time of fertilizer placement to dryland barley. *Indian J. Agron.* 25 (4): 741-742.
- Singh, R.A.; V.P. Singh; V.K. Chandola Sant Prasad; R.P. Singh and J. Yadav. 1990.** Economics of fertilizer use on barley in rainfed 'Diara' areas of eastern uttar. Pradesh, India. *Rachis* (1) : 30-31.
- Singh R.P. and M. Parshad. 1972.** Studies of the effect of different levels on nitrogen and phosphorous on the yield of irrigated and rainfed barley. *Indian J. Agron.* 17 (3) : 136-139.
- Snedecor, G.W. and W.G. Cochran. 1967.** Statistical methods. 6th Ed. Iowa State Univ. Press, Iowa, USA.
- Solanki, N.S.; R.R. Singh and R.S. Chauhan. 1987.** Effect of nitrogen, agrochemicals and Azotobacer inoculation with and without FYM on yield and quality of rainfed barley. *Indian J. Agric. Res.* 21 (2) : 83-87.

- Soltanpour, P.N.; M. El-Gharous; A. Azzaoui and M. Abdelmonem. 1987.** Nitrogen and phosphorous soil-test calibration studies in the Chaouia region of Morocco. Publication, ICARDA, International Center for Agricultural Research in the Dry Areas 120: 67-81. (c.f. Field Crop Abst. 42 (3) 171, 1989).
- Tomar, G.S. 1989.** Response of barley to N and P application under rainfed conditions. Current Res. Univ. Agric. Sci. 18 (9) : 123-124.
- Torofder, G.S. and M. A. Hossain. 1991.** Effect of N and seed rate on the yield of barley under rain-fed condition. Annals of Bangladesh Agric. 1 (1) : 47-49. (c.f. Field Crop Abst. 46 (9), 708, 1993).
- Verma, U.K.; S.B. Singh; R.C. Singh and M. Pandey. 1977.** Response of barley varieties to levels of nitrogen under rainfed conditions. Indian J. Agron. 22 (1) 16-18.
- Wahbi, A.; M. J. Jones; E. Jabbour; K. El Hajj and A. Safee. 1989.** Fertilizer trials on barley in Northern Syria. The Agrometeorology of Rainfed Barley-based farming Systems. Proc. of an International Symposium 6-10 March. Tunis. 268-272.