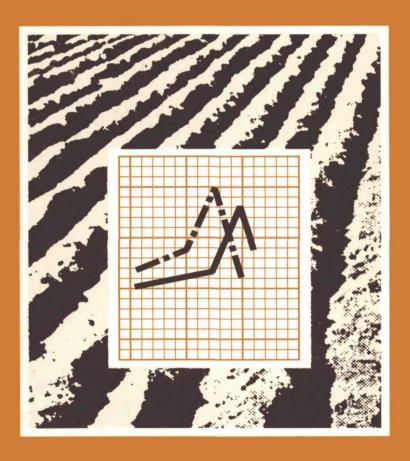
The Journal of Agricultural Science



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FIRMAN, D. M. (1987). Leaf growth and senescence of the potato. PhD thesis, University of Cambridge.

JONES, L. (1990). White clover understorey as a supply of nitrogen to cereals. In Proceedings of the 13th General Meeting of the European Grassland Federation, Volume I (Eds N. Gáborčik, V. Krajčovič & M. Zimkova), pp. 154-158. Banksá Bystrica, Czechoslovakia: Grassland Research Institute.

KIRBY, E. J. M. & APPLEYARD, M. (1984). Cereal development and its relation to crop management. In *Cereal Production* (Ed. E. J. Gallagher), pp. 161-173. London: Butterworths.

ŚAXENA, M. C. & SINGH, K. B. (Eds) (1987). The Chickpea. Wallingford: CAB International.

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