

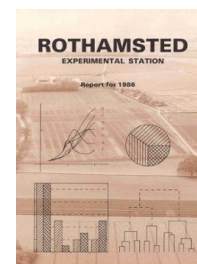
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# Rothamsted Experimental Station Report for 1986

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## Publications

### Rothamsted Research

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## PUBLICATIONS

Publications are listed under Divisions and not under their constituent Departments. Inter-Divisional papers appear under all contributing Divisions.

### MULTIDISCIPLINARY AGRONOMY

- PREW, R. D., BEANE, J., CARTER, N., CHURCH, B. M., DEWAR, A. M., LACEY, J., PENNY, A., PLUMB, R. T., THORNE, G. N. & TODD, A. D. (1986) Some factors affecting the growth and yield of winter wheat grown as a third cereal with much or negligible take-all. *Journal of Agricultural Science, Cambridge* **107**, 639–671.
- WIDDOWSON, F. V., DARBY, R. J., DEWAR, A. M., JENKYN, J. F., KERRY, B. R., LAWLOR, D. W., PLUMB, R. T., ROSS, G. J. S., SCOTT, G. C., TODD, A. D. & WOOD, D. W. (1986) The effects of sowing date and other factors on growth, yield and nitrogen uptake, and on the incidence of pests and diseases, of winter barley at Rothamsted from 1981 to 1983. *Journal of Agricultural Science, Cambridge* **106**, 551–574.

### AGRONOMY AND CROP PHYSIOLOGY DIVISION

#### Book

- LAWLOR, D. W. (1986) *Photosynthesis: metabolism, control and physiology*. Harlow: Longman.

#### Theses

- BROWN, K. F. (1986) *Water use and fibrous root growth of sugar beet*. Ph.D. Thesis, University of Nottingham.
- SMITH, H. G. (1986) *Comparative epidemiology and host: virus interactions of beet yellows virus and beet mild yellowing virus in sugar beet*. Ph.D. Thesis, University of East Anglia.

#### Research Papers

- ARMSTRONG, J. M., MILFORD, G. F. J., POCOCK, T. O., LAST P. J. & DAY, W. (1986) The dynamics of nitrogen uptake and its remobilization during the growth of sugar beet. *Journal of Agricultural Science, Cambridge* **107**, 145–154.
- CHALABI, Z. S. & DAY, W. (1986) Application of dynamic jump process analysis to modelling tiller production in winter wheat. *IMA Journal of Mathematics Applied in Medicine and Biology* **3**, 23–40.
- CHALABI, Z. S., MILFORD, G. F. J. & DAY, W. (1986) Stochastic model of the leaf area expansion of the sugar-beet plant in a field crop. *Agricultural and Forest Meteorology* **38**, 319–336.
- DAY, W. (1986) A simple model to describe variation between years in the early growth of sugar beet. *Field Crops Research* **14**, 213–220.
- DURRANT, M. J. & LOADS, A. H. (1986) The effect of pellet structure on the germination and emergence of sugar-beet seed. *Seed Science and Technology* **14**, 343–354.
- FITT, B. D. L., CREIGHTON, N. F., LACEY, M. E. & MCCARTNEY, H. A. (1986) Effects of rainfall intensity and duration on dispersal of *Rhynchosporium secalis* conidia from infected barley leaves. *Transactions of the British Mycological Society* **86**, 611–618.
- FITT, B. D. L., WALKLATE, P. J., MCCARTNEY, H. A., BAINBRIDGE, A., CREIGHTON, N. F., HIRST, J. M., LACEY, M. E. & LEGG, B. J. (1986) A rain tower and wind tunnel for studying the dispersal of plant pathogens by rain and wind. *Annals of Applied Biology* **109**, 661–671.
- GUMMERSON, R. J. (1986) The effect of constant temperatures and osmotic potentials on the germination of sugar beet. *Journal of Experimental Botany* **37**, 729–741.
- MCCARTNEY, H. A., LACEY, M. E. & RAWLINSON, C. J. (1986) Dispersal of *Pyrenopeziza brassicae* spores from an oil-seed rape crop. *Journal of Agricultural Science, Cambridge* **107**, 299–305.



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- (STEVEN, M. D.), BISCOE, P. V., JAGGARD, K. W. & (PARUNTU, J.) (1986) Foliage cover and radiation interception. *Field Crops Research* **13**, 75–87.
- WALKLATE, P. J. (1986) Markov-chain particle dispersion model based on air flow data: extension to large water droplets. *Boundary Layer Meteorology* **37**, 313–318.
- WINDER, G. H. & DUNNING, R. A. (1986) Effects of row application of insecticides at sowing on leaf miner (*Pegomya betae*) injury to sugar beet. *Crop Protection* **5**, 109–113.

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- HEATHCOTE, G. D. (1986) Yellow cylindrical sticky aphid traps at Rothamsted and Broom's Barn with particular reference to the study of yellowing viruses affecting sugar beet. *Rothamsted Experimental Station. Report for 1985*, 237–244.

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- ARMSTRONG, M. J., SQUIRE, A. J. & MILFORD, G. F. J. (1986) The nitrogen nutrition of sugar beet—an approach to better forecasting of nitrogen fertiliser requirement. *British Sugar Beet Review* **54**, (1), 84–87.
- ASHER, M. J. C. (1986) The occurrence and control of sugar-beet powdery mildew. In: *Crop protection of sugar beet and crop protection and quality of potatoes: Part 1. Aspects of Applied Biology* **13**, 131–137.
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- HEATHCOTE, G. D. (1986) Virus yellows of sugar beet. In: *Plant virus epidemics*. Eds G. D. McLean, R. G. Garrett & W. G. Ruesink. Sydney: Academic, pp. 399–417.
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BIOMATHEMATICS DIVISION

Programs and System Guides

RESCU/095/86	Scientex Work Processor, Advanced User Guide
RESCU/096/86	Managing the SSEW Laboratory Automation System
RESCU/097/86	SSEW Automation User Guide
RESCU/098/86	R\$SIGLIB User Guide
RESCU/099/86	Maintaining and Repairing Idris File System
RESCU/100/86	HX20 programs DISEASE and CROPDATA
RESCU/102/86	Scientex Address Extraction
RESCU/103/86	dBASE III+ Complement Database
RESCU/104/86	Plant Pathology Potato Data Capture
RESCU/105/86	Entomology Potato Data Capture
RESCU/106/86	Daisy Wheel Printing on the Scientex

Book

- DIGBY, P. G. N. & (KEMPTON, R. A.) (1986) *Multivariate analysis of ecological communities*. London: Chapman and Hall.

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CROP PROTECTION DIVISION

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