



ROTHAMSTED
RESEARCH

Library & Archives

1861.

London

April 12

Dear Sir:

Rothamsted

Archive

Catalogue



Rothamsted Archives Catalogue compiled by Margaret Harcourt Williams

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Cover design: Lynda Castle, Visual Communications Unit, Rothamsted Research.

Cover includes a letter from John Bennet Lawes, 1861 and a photograph of Rothamsted staff outside the Russell Building c.1919.

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Agricultural experiments began at Rothamsted in Hertfordshire in 1843 and continue to this day. There are brief histories of Rothamsted and of the Lawes Agricultural Trust on the Rothamsted website <http://www.rothamsted.ac.uk>

About the catalogue

This catalogue is a revised and greatly expanded version of *Rothamsted Archives: a catalogue of the records in the Library, Rothamsted Experimental Station*, compiled by Margaret Harcourt Williams in 1987. The original investigation and cataloguing of the Rothamsted archives was made possible through a grant from the Leverhulme Trust in 1984; when this grant finished, continuing work on the archives was funded by the Lawes Agricultural Trust. We are grateful to both these organisations for their interest and support.

The terms of the 1984 grant restricted work to sorting and cataloguing the papers held in a single storeroom whose contents consisted largely of 19th century material from the work of Lawes and Gilbert, together with early to mid 20th century material from some staff members, especially from the Director EJ Russell. The entire Rothamsted historical archive was potentially much larger and since the publication of the original catalogue in 1987 it has more than doubled, as an extensive rebuilding programme prompted some departments to transfer their older material to the Library. However, other departments have opted to retain their archives so the Library does not currently hold the entire archive of Rothamsted Research and its predecessor bodies. In general, archives in departments have not been catalogued although some lists may be available.

The catalogue has been organised alphabetically by series, with each series preceded by a brief description of its contents and their provenance. There is no index but the entire catalogue can be searched by using the 'find' function in Adobe Acrobat Reader. However, it should be borne in mind that the catalogue contains descriptions of items in the archives, not transcriptions of their content, so names and subjects mentioned in the records themselves may not always be searchable. If a search produces no results, it may be worth browsing through relevant series to try to identify material of possible interest.

Scope and content of the archives

The earliest archives are from the time of Lawes and Gilbert (1843–1901). They include:

- archives of experiments begun in the 19th century ie experimental data with related notebooks and letters
- drafts and proofs for their numerous scientific papers
- bound volumes of correspondence
- a few personal papers.
- papers relating to the Lawes Chemical Manure Company
- papers relating to the Lawes Testimonial Laboratory.

Although scientific experiments began at Rothamsted in the early 1840s the organisation was not given a formal structure until 1889 when the owner and founder, Sir John Lawes, established the Lawes Agricultural Trust. Before this, there are no formal administrative archives and, even though after 1889 the Lawes Agricultural Trustees supervised the work here, it was largely directed by Sir John and his scientific partner Sir Henry Gilbert until they died in the early 20th century. Therefore there are no visitors' books, records of appointments or similar records and most of the 19th and early 20th century archives here are scientific data and drafts of material for publications.

Other experimental work is illustrated by extensive archives from departments. These have been arranged by the first title of the department that produced them although, after closures and mergers, the current title may differ. Botany, Chemistry, Farm, Field Experiments, Meteorology and Woburn all produced extensive archives while smaller collections have been received from the Library, the Manor, Microbiology, Saxmundham and Tunstall, Statistics and Soils.

Administrative records include:

- a long series of archives of the Lawes Agricultural Trust
- a large collection, including numerous photographs, from EJ Russell, Director 1912 – 43
- small collections from other 20th century Directors
- archives of the Staff Union (a social club) and of the Friends of Rothamsted and related bodies
- small collections relating to awards, exhibitions, the Rothamsted site and the Society for Extending the Rothamsted Experiments.

There are personal papers from the 19th century scientists Robert Warington senior and junior and also a series of miscellaneous personal papers, some of which are

from former staff members and others from people with more distant connection to Rothamsted.

Rothamsted Library does not normally collect archives but the archives do include some largely 20th century estate records, a gift from the Lawes family's land agents, and a small number of manuscripts relating to agriculture. This is what remains of a collection made by EJ Russell, which has been dispersed.

Archives held by the Library are mostly boxed and stored on approximately 200 one metre shelves. They are mainly paper, including plans and newspaper cuttings, but they also include different types of photographs. At present, in 2010, there is very little in other media.

Consulting the Rothamsted Library Archives

Rothamsted is a working Research Institute, and as such is not generally open to the public, although we always welcome bona fide researchers who wish to use our collections. However, the Library has a very small staff, so if you wish to look at any of the items listed in the catalogue, please make an appointment by emailing the Library at res.library@rothamsted.ac.uk or writing to the Librarian. To help you make the most of your visit, please give us as much information as you can and please do some preparatory work before approaching us. The Rothamsted website includes information on the origin of Rothamsted, the Lawes Agricultural Trust and the Classical and Long-term experiments and you can find other information from the bibliography below and the extensive list of frequently asked questions:

<http://www.rothamsted.ac.uk/Research/Centres/Content.php?Section=Library&Page=ArchivesFAQs>

Please note that all the archives kept in the Library are included in this catalogue, although the amount of detail given varies. The individual series do not follow a standard arrangement, due to the diversity of the material and length of time over which it has been acquired. Some series are arranged chronologically while others are sub-divided according to related materials or function. However, if something you hope to find is not listed, it is more likely to be because it is not held by the Library than because it has not been catalogued. Please look below for details of related material at Rothamsted and related material elsewhere.

The reference codes given in the catalogue are also used for locating the documents and you should quote these if you are ordering documents prior to a visit. Most of the codes used in the 1987 catalogue have been altered. Although this catalogue was never widely available, some of its references have been used in published articles; if you come across these, please remember that they will have changed. If what you want to see is not easily identified in the current catalogue, please give us as many details as you can.

Related material at Rothamsted

All departments hold their own current and semi current records.

Biomathematics and Bioinformatics hold the archives of the former Statistics Department.

VCU, formerly Photography, has an extensive collection of photographs, some dating from the 19th century, mainly taken during the course of work at Rothamsted.

Related material in Rothamsted Library

Printed papers by Lawes, Gilbert and other scientists, details on Rothamsted Library catalogue.

A large collection of bound miscellaneous pamphlets, many of which are offprints or photocopies. Partly catalogued, details on Rothamsted Library catalogue.

Rothamsted annual reports, 1908 onwards.

Related material elsewhere

Hertfordshire Archives and Local Studies, <http://www.hertsdirect.org/libsleisure/heritage1/hals> have Rothamsted estate records from the 1200s to the 1700s, and also family records, mainly from the 17th and 18th centuries. The relevant catalogues are D/Elw and D/Z55.

Bristol University, <http://www.bristol.ac.uk/is/library/collections/specialcollections/> has the records of Long Ashton Research Station, which was once administered by Rothamsted.

Gaps in the archives

There are only a few personal papers of either Lawes or Gilbert. The Lawes family may have taken their archives with them when they finally left Rothamsted in the 1930s or may have destroyed them; Mrs Gilbert took her husband's papers with her when she left Harpenden. She returned some books and letters later but these are scientific not personal.

There are very few 19th century estate records at either Rothamsted or HALS.

There are very few early records of the Lawes Chemical Manure Company.

There is no lengthy correspondence from other scientists to either Lawes or Gilbert although there are some letters, mainly to Gilbert.

Further reading

Boalch, DH. (1978) The manor of Rothamsted and its occupants, 2nd ed. Harpenden, Rothamsted Experimental Station.

Dyke, GV. (1991) John Bennet Lawes: the record of his genius. Taunton, Research Studies Press.

Dyke, GV. (1993) John Lawes of Rothamsted: pioneer of science, farming and industry. Harpenden, Hoos Press.

Grey, E. (1922) Reminiscences, tales and anecdotes of the laboratories, staff and experimental fields, 1872 – 1922. (available to read on line at <http://www.archive.org/details/rothamstedexperi00greyuoft>)

Grey, E. (1934) Cottage life in a Hertfordshire village: "How the agricultural labourer lived and fared in the late '60's and '70's". St.Albans, Fisher Knight & Co.

Grey, E. (1977) Cottage life in a Hertfordshire village: 1st edition reprinted with an introduction by FML Thompson. St. Albans, Harpenden & District Local History Society.

Hall, AD. (1917) The book of the Rothamsted Experiments. London, John Murray.

Hastings, M. (1974) Diane: a Victorian. London, Michael Joseph. (A biography of Sir John Bennet Lawes' daughter Caroline)

Ristaino, JB. (ed) (2008) Pioneering women in plant pathology. St Paul, MN, APS Press.

Russell, EJ. (1956) The land called me. London, Allen & Unwin.

Russell, EJ. (1966) A history of agricultural science in Great Britain: 1620-1954. London, George Allen & Unwin.

Previous catalogues

Rothamsted Archives: a catalogue of the records in the Library, Rothamsted Experimental Station, 1987, has been completely superceded by the present web based catalogues and should not be used to identify any of the archives. It reflected the composition and arrangement of the archives in 1987. Since then the collection has more than doubled in size, reference codes have been altered and some series rearranged.

Rothamsted letters: a catalogue of the correspondence of Sir John Lawes and Sir Henry Gilbert, 1989, is now available on the internet:

<http://www.rothamsted.ac.uk/Research/Centres/Content.php?Section=Library&Page=ArchivesLettersLandG>

Updated 15 August 2012

List of sections

- ADH** Papers of Alfred Daniel Hall, 1864 – 1942. Director of Rothamsted 1902-1912
- AWA** Awards and diplomas presented to Rothamsted, mid 20th century onwards
- AY** Records relating to the 150th Anniversary Year celebrations in 1993
- BOT** Records of the Botany Department, including botanical surveys of Broadbalk, Geescroft and Park Grass
- CHEM** Records of the Chemistry Department, mid 19th century onwards
- DIRS** Papers of Directors after 1943 (WG Ogg, FC Bawden, L. Fowden, KJ Treharne)
- DRAF** Papers relating to experiments, talks and work by JB Lawes and JH Gilbert 1840s - 1900
- EXH** Papers relating to Rothamsted items loaned for national and international exhibitions 1870s -1890s
- EXP** Records of experimental work, including the White Books and the Green Books, 1840s onwards
- FARL** Records of the Friends of Rothamsted, Long Ashton Members' Association, Arable Research Institute Association (ARIA), Rothamsted Research Association (RRA) 1980s onwards
- FARM** Records relating to Rothamsted Farm, including farm diaries, notebooks, inventories, valuations etc. mid 19th century onwards
- FX** Records of Field Experiments at Rothamsted & Woburn 1920s onwards
- GIL** Papers of Sir Henry Gilbert 1817-1901 (at Rothamsted 1843-1901). A detailed descriptive catalogue of the Lawes/Gilbert correspondence, compiled by Margaret Harcourt Williams in 1989, is also available at <http://tinyurl.com/Lawes-Gilbert-Letters>
- JBL** Papers of Sir John Bennet Lawes 1814-1900, founder of Rothamsted

- LAT1-9** Lawes Agricultural Trust: foundation and administration, 1889-mid 20th century
- LAT10-19** Lawes Agricultural Trust: minutes 1931-1940
- LAT20-29** Lawes Agricultural Trust: financial papers 1900-
- LAT30-49** Lawes Agricultural Trust: miscellaneous financial records 1889-
- LAT50-59** Lawes Agricultural Trust miscellaneous records prepared for the Trust, 2003 – 4
- LCMC** Records relating to the Lawes Chemical Manure Company mid 19th-mid 20th century, including Lawes' Super-Phosphate Patent suit
- LIB** Library records, 1940s – 1990s, including material relating to early books, the livestock print collection and manuscripts
- LTL** Lawes Testimonial Laboratory
- MAN** Rothamsted Manor, including photographs, plans, newspaper and magazine cuttings, inventories, correspondence about Manor paintings etc., mainly 20th century
- MET** Meteorological and drainage records for Rothamsted, Woburn and Saxmundham mid 19th century onwards
- MIC** Microbiology 1950s – 1980s. Scientific papers of Dr Barbara Mosse
- MSS** Manuscripts relating to agriculture, 17th – 19th centuries, collected by Sir John Russell, including papers and correspondence of Sir John Sinclair and Sir Joseph Banks
- PC** 19 bound volumes of letters and papers relating to Rothamsted experiments. Many are replies to letters from JH Gilbert, but the index (PC20) is inadequate: 1840s-1890s
- PHO** Miscellaneous photographs (including non-Rothamsted images) mainly mid 19th-mid 20th century, many collected by Sir John Russell
- PROD** Production papers for work by JB Lawes and JH Gilbert, 1840s – 20th century

- RB** Documents received from Rumball and Sedgwick, Estate Agents, relating to the management of the Rothamsted Estate mid 19th-mid 20th century
- RUS** Papers of Sir (Edward) John Russell, at Rothamsted 1907-1943; Director 1912-1943, including administrative papers, correspondence, travel diaries and photograph albums
- RWJ** Personal and scientific papers of Robert Warington, junior (1838-1907), at Rothamsted and JB Lawes' London factories mid-late 19th century
- RWS** Scientific papers of Robert Warington, senior (1807-1867), chemist
- SERE** Papers relating to the Society for Extending the Rothamsted Experiments 1904-1956
- SITE** Plans and documents relating to Rothamsted buildings and site development 19th – 21st centuries
- SOIL** Production papers and data relating to work by Soil Science staff in 1980s and 1990s
- ST** Saxmundham and Tunstall records transferred to Rothamsted in 1998 and 1999
- STA** Committee minutes, financial and administrative records for the Staff Union/Sports and Social Club 1919 – mid 1990s. Some general staff administrative records
- STATS** Partial records of the Statistics Department (now Biomathematics and Bioinformatics); the majority of the Statistics archive is held by BAB
- STF** Records of individual Rothamsted staff, including Edwin Gray, Winifred Brenchley, Mary Glynne, Frank Yates
- WOB** Administrative papers and records of experiments at Woburn Farm and Woburn Fruit Farm



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ADH

Alfred Daniel Hall

1864 – 1942, Director of Rothamsted 1902 – 12

Extent and form:	Four boxes and one loose item, mainly paper documents in reasonable condition
Administrative history:	Created by AD Hall at Wye College, Kent and Rothamsted
Custodial history:	Brought by AD Hall to Rothamsted, left on departure and stored at Rothamsted
Accruals:	Unlikely
Existence of copies:	None known
Related material at Rothamsted:	No manuscript material known; printed works in the Library
Related material in other repositories:	The John Innes Centre, Colney Lane, Colney, Norwich, Norfolk NR4 7UH
	Updated 21 December 2011

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

AD Hall took charge at Rothamsted shortly after the deaths of the founders and after a brief period during which JA Voelcker had had temporary charge. Rothamsted expanded under Hall's direction, with new appointments including a bacteriologist, a botanist and a soil chemist. Hall's classic work *An Account of the Rothamsted Experiments* was published in 1905. He left in 1912 to become full-time Development Commissioner of the Board of Agriculture.

Hall's archive at Rothamsted is small and relates mostly to external work.

- ADH1** Notebook, largely figures, relating to experimental work at Rothamsted, 1901. *One volume*
- ADH2** Notebook used at Wye College, Kent by AE Ashford, GE Pilgrim and possibly also by AD Hall, early 20th century. *One volume*
- ADH3** Reports of the Home Grown Wheat Committee of the National Association of British and Irish Millers, of which AD Hall was a member, 1903 – 11. *One bundle*
- ADH4** Original diagrams and data used for 'An Account of the Rothamsted Experiments', 1905. *One bundle*
- ADH5** Papers relating to AD Hall's work as secretary of Section VII, agricultural chemistry, of the 7th Congress of Applied Chemistry, 1909. *One box*
- ADH6** Production papers for Report on the Soils of Kent, Surrey and Sussex by AD Hall and EJ Russell, London HMSO, 1911. *Five bundles*
- ADH7** Tables, plans and letters about a survey of pastures on Romney Marsh, early 20th century. *One bundle*
- ADH8** Cuttings of AD Hall's contributions to *The Countryman*, 1935 – 42. *One envelope*
- ADH9** Commemorative diplomas from the Franco-British exhibition, 1908, the Japan-British exhibition, 1910 and the Turin International exhibition, 1911. *Four items with JBL2.7*
- ADH10.1** Photograph c1910. *Framed*
- ADH10.2** Portrait etching by CH Barraud, 1938. *Framed*



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AWA

Awards and diplomas, mid 20th century onwards

Extent and form:	Two boxes and one loose item.
Location:	Store
Administrative history:	Transferred to the Library Archives by the Director's secretary in the mid 1990s
Custodial history:	Held in the Director's office and transferred to the Library Archives c1995
Accruals:	Possible. Rothamsted received more awards than there are here. It continues to receive awards but there is no regular transfer of awards and related material to the Library Archives.
Existence of copies:	Unlikely
Related material at Rothamsted:	JBL2.7 Awards to JB Lawes and JH Gilbert, late 19 th century; ADH9 Early 20 th century awards to RES; AY2 Receiving Liebig medal; WOB11.1, WOB12.1 Early 20 th century awards to Woburn, all in Library Archives See below for items relating to the Queen's Award Other awards and related items possibly held by the Director or the Institute Secretary
Related material in other repositories:	None known
	Updated 19 March 2011

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

Rothamsted, its directors and its scientists have received commemorations and awards since John Bennet Lawes was presented with a testimonial from British farmers in 1854/5. This small collection of awards and related administrative papers does not contain all the awards given to Rothamsted or its staff from the mid 20th century onwards but only those transferred to the Library.

AWA1 Queen's Awards

AWA1.1 Queen's Award for Technological Achievement, 1976, 1980.
Two certificates, stored loose on shelf at base of AWA boxes; a container is stored in box with AWA1.1; two photographs of award presentation 1976 in box. The Awards are stored by the Librarian and the Rothamsted Archive of Scientific and Farm Equipment includes a textile with the Queen's Award logo

AWA1.2 Queen's Award magazine, with details of work at Rothamsted, 1976. *One item*

AWA2 Other awards

AWA2.1 Lenin All-Union Academy of Agricultural Sciences, Moscow: 125th Anniversary greetings, 1968. *One folder*

AWA2 Administrative papers

AWA2.1 Director's correspondence and related papers and booklets on British Technology Group Awards, Albert Einstein World Science Award and Wolf Foundation Prize, Genstat and Pyrethrin Inventors' Awards, Pollution Abatement Technology Award, Queen's Awards, UNESCO Science Prize, 1970s – 90s. *Eight folders; closed*



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AY

Anniversary year, 1993

Extent and form:	Three boxes and two loose items
Location:	Store
Administrative history:	Created for Rothamsted 's 150 th Anniversary Year celebrations in 1993
Custodial history:	Stored with Dr John Stevenson, Anniversary Year Coordinator, and transferred to the archives in 2002
Accruals:	Unlikely
Existence of copies:	Possibly, with committee members and other interested parties
Related material at Rothamsted:	Possibly, with committee members and other interested parties
Related material in other repositories:	Unlikely
	Updated 19 March 2011

Access and Copyright:

Contact the Librarian:

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Rothamsted's 150th anniversary in 1993 was marked by a series of publications and commemorative events both at Rothamsted and elsewhere, eg the Royal Society. The most significant event was the Queen's visit, during which she consented to becoming a patron of Rothamsted.

The small archive is divided into papers received from the co-ordinator and those received from departments.

AY1 John Stevenson, anniversary year co-ordinator

Notes, minutes, circulars, arrangement details etc for Open Day 1989; for Open Weekend, Queen's Visit, Staff Party and Royal Show 1993; for the 1993 committee and for possible and actual scientific and special events.

150th anniversary conference abstracts with presentation folder; anniversary booklet; SPRUCE conference abstracts; The Agronomist number 3, 1993 with an article on Rothamsted; T Lewis '150 Years of Research at Rothamsted' from JRASE volume 153, 1992; Gardeners' Question Time recording.

Three bundles

AY2 Staff and departments

Circulars to heads of departments, calendars of events and minutes of meetings of departmental representatives and of the 1993 committee, none of which is a complete series.

Programmes, correspondence with Director, handouts, guest lists etc for Lawes lunch, 150th anniversary concert, Open Weekend, retired staff party, summer ball, Royal Society reception, Royal Show, 150th anniversary conference, service of thanksgiving, Queen's visit, 1843 dance, classical ale, restoration of JB Lawes' and JH Gilbert's graves, SPRUCE conference, photographs of anniversary conference including photographs of Trevor Lewis receiving Liebig medal from Liebig's great-great-nephew.

Two folders of photographs, one solely of the Queen's visit; one box of miscellaneous papers, largely unsorted

AY3 Souvenirs

Calendar, 1993. *Two copies, stored near AY boxes. Other souvenir items are held by the Rothamsted Archive of Scientific and Farm Equipment in 2011*



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BOT

Botany Department, early 20th century onwards

Extent and form:	31 boxes and two binders, worn through use but generally in reasonable condition
Location:	Store
Administrative history:	Created by Dr Winifred Brenchley and other members of the Botany Department.
Custodial history:	In the annexe strongroom before 1984
Accruals:	Possible
Existence of copies:	None known
Related material at Rothamsted:	None known
Related material in other repositories:	None known
	Updated : 9 September 2011

Access and Copyright:

Contact the Librarian:

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Lawes and Gilbert carried out botanical work through their analyses of samples from the Park Grass experiments and in 1906 Winifred Brenchley, the first woman scientist to work at Rothamsted, was appointed to the staff as a botanist.

As the scope of work at Rothamsted increased in the early 20th century a departmental structure became necessary and the Botanical Laboratory is listed in the 1913 Annual Report. This became the Botany Department and was subsumed into a separate Crop Physiology Department in 1948. It ceased to exist in the early 1980s when most of the work was transferred to the Biochemistry Department or the newly created and short lived Physiology and Environmental Physics Department. More 'traditional' botanical research, including weed science and surveys of the flora of Park Grass continues in other departments.

The work of the Botany Department is described by EJ Russell in A History of Agricultural Science in Great Britain. Most of the archives below are staff notebooks and botanical surveys.

BOT1, BOT2 Staff

BOT1.1 – 14 Notebooks of W Brenchley, early 20th century to early 1940s, including work on water culture, weed seeds on Broadbalk, pot experiments on nutrition and minor element work. *138 notebooks of similar format, numbered 1 to 802, many numbers unused, plus one larger notebook.*

BOT1.15 Lists of contents of BOT 1.1 – 14. *One folder*

View the lists at:

http://www.rothamsted.ac.uk/Research/Centres/Content/Library/ArchiveDocuments/Botany_notebooks.pdf

BOT1.16 W Brenchley's notes from weed surveys, c1910 – c20. *Two boxes*

BOT2.1 W Brenchley's lists of species found on Harpenden Common with plan and account of work on Harpenden Common vegetation, 1906, 07 and after 1916. *One folder*

BOT2.2 W Brenchley's notes on seed soaking experiments, 1920s. *One folder*

BOT2.3 Weed pictures drawn by Miss Salisbury for Weeds in Farmland by Brenchley and Long, c 1916. *Two parcels*

BOT2.4 Notebooks analysing work on weed flora and weeds in farmland by Brenchley, Thurston and others, 1920s onwards. *Three boxes, one partly open.*

- BOT2.5** Notes on work by JM Thurston (unsorted) 1950s – 80s. *Two boxes*
- BOT2.6** Notebooks of JM Thurston and others, probably largely for work on wild oats, 1950s – 70s. *Three boxes*
- BOT2.7** R Cox's notes on work on *Stellaria* and *matricaria*, 1960s, 1970s, *One binder*
- BOT2.8** K Warington's notes on water culture experiments, 1946 – 57. *Two binders*
- BOT2.9** Unidentified binders, 1970s: one with notes on weeds at Rothamsted, Woburn, Saxmundham and Scout Farm; one relating to *Alopecurus myosuroides* and wheat comparative pot experiments. *One box*
- BOT3** **Broadbalk**
- BOT3.1** Broadbalk botanical survey records, (Brenchley, Thurston and Warington) c 1930 – c 1980. *One box*
- BOT3.2** Broadbalk weed surveys 1991 – 3; no survey in 1994, 2001 and 2008 as section 8 was fallow; 2009 onwards (added annually by Stephen Moss); data summary of Broadbalk weed surveys 1991 onwards (cd and hard copy). *One box*
- BOT4** **Geescroft and Broadbalk Wilderness**
- BOT4.1** Botanical records of Broadbalk and Geescroft Wildernesses (Brenchley, Thurston) 1950s and later miscellaneous related papers. *One box*
- BOT5** **Park Grass**
- BOT5.1** Park Grass botanical surveys (Brenchley, Warington, Thurston, Witts, Williams) c 1910 – c 1980, with earlier Park Grass yields data. *One box*
- BOT5.2** David Williams' Park Grass surveys, 1990 – 6. *One folder*



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CHEM

Chemistry and related departments, mid 19th century onwards

Extent and form:	99 boxes, 21 binders
Administrative history:	Transferred to archives from 1987 onwards by staff members
Custodial history:	Created at Rothamsted and held in departments and with staff members prior to transfer to archives
Accruals:	Possible but there are no obvious series that could be added to
Existence of copies:	Unlikely, except for reports
Related material at Rothamsted:	Likely, in appropriate departments
Related material in other repositories:	Unlikely
	Updated: 15 August 2012

Access and Copyright:

Contact the Librarian:

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Chemistry department: much of the work done by Lawes and Gilbert in the 19th century could come under a broad heading of chemistry, especially that relating to soils and plant nutrition. Similar work continued throughout the 20th century and to the present day. Classification of some archives, especially those relating to departments, can be arbitrary or subjective because of changes in the organisation of research, which often results from changes in emphasis.

In the early 20th century, the Goldsmiths' Company gave a grant for the appointment of a soil chemist at Rothamsted. All the archives below were either originally stored as Chemistry Department Archives and transferred to the Library Archives as such, or were transferred by members of the successor departments. Most of them are working notebooks, data and papers of department members.

The Library Archives holds numerous reports from the late 1930s to the 1960s prepared by Rothamsted scientists. There is a list of titles and authors at:

<http://www.rothamsted.ac.uk/Research/Centres/Content/Library/ArchiveDocuments/CR.pdf>

CHEM1 Notebooks received in 1994

These include exercise books, notebooks of different sizes, pocket books and binders. They are all described as notebooks for the purpose of this list. The list below is based on the personal names from the outside of each bundle and the numbers and other details have been copied from the outside of each book, where these exist.

The notebooks are in good condition. The brown wrapping paper in which they came to the Archives has been destroyed but labels and other identifications have been kept. Each entry represents one of the bundles unless otherwise indicated.

CHEM1.1 SP Aiyer, JA Black, F Steenberg, 1930s: clays, phosphates and untitled. GC Sawyer, 1913: weights and balances, notebook numbered 216. *Seven notebooks*

CHEM1.2 WO Atkinson, 1903 – 5: flour and untitled. *Four notebooks*

CHEM1.3 JK Basu, late 1920s: C/JKB 1 – 18, base exchange and pH values, donnan equilibrium, electro dialysis, PG exchangeable bases, Woburn exchangeable bases, lime requirement, mechanical analysis and untitled. *18 notebooks*

CHEM1.4 AH Bowden, 1920 – 36: APC rain samples, blanks on nitrogen stills, miscellaneous N samples, miscellaneous samples, nitrate plot observations, nitrogen and dry matter in potatoes, nitrogen in barley samples, straw, potato samples, Woburn green manuring and untitled. *23 notebooks*

- CHEM1.5** AH Bowden, early 1940s: 913, 932 CR untitled, 927 CR APC rain samples, 979 CR APC rain samples. *Four notebooks*
- CHEM1.6** EM Crowther, c1915 – 20s: 302, 341, 364, 434 Weston cells, 462, 469, continued from 434, 524 soil from F Wakerley, 576 Harpenden Common, 632, bicarb work charts, collected pH and titration curves, energy relationships on Broadbalk, flue dust, grass plots and pH, immersed float, inverted tin method, liming experiments, nitrification, nitrogen and dry matter in barley, nitrogen in mustard, potatoes, samples stored away, soil CaCO₂ water experiments, suction moisture equivalents, summary of electrometer pH results, treatment of bicarb results, treatment of sedimentation, wart disease, weights and untitled. 53 *notebooks in three bundles*
- CHEM1.7** WA Davies, 1912 – 5: yeast. *Nine notebooks, including one from AJ Daish*
- CHEM1.8** WA Davies, 1913 – 6: notebooks numbered 242, 273 (Carlo Mendes) 281, 282, 311 (GC Sawyer) 318, analyses of sugar and illegible. *Eight notebooks plus a few loose pages*
- CHEM1.9** HO Ghani, 1936 – 8: chem M.O.G., summarised results A – D. *17 notebooks*
- CHEM1.10** E Grey, B Weston and JJ Willis, 1901 – 21: mangolds, roots and leaves, swedes, turnips plus B Weston's 'time book' a notebook including starting times, subscriptions, receipts and payments 1920 – 1. *19 notebooks; these were transferred to the Library Archives with rest of CHEM1 but belonged to support staff (the field superintendent, the farm manager and the field superintendent) and not to scientists.*
- CHEM1.11** HJG Hines, 1920s: carbon, Gold Coast soils, nitrogen, potatoes, Woburn sugar beet and untitled. *Nine notebooks*
- CHEM1.12** HJG Hines, 1920s: barley, colorimetric data, sugar beet and untitled, possibly referring to basic slag. *20 notebooks including one from AJ Walker and two from JJ Brereton, plus loose pages*
- CHEM1.13** E Horton, 1913 – 5: 222, 265, 291, 310, all untitled. *Four notebooks*
- CHEM1.14** G Knott, 1879 – 91: nitrogen determinations. *Five notebooks numbered 1 – 5 plus bundle of loose pages with title 'Knott's Nitrogen Determinations Miscellaneous'*
- CHEM1.15** HW Lawrence, 1891 – 1901: nitrogen determinations. *5 notebooks numbered 1 – 5 with note saying book 6 of this*

series may have been destroyed 'with the N calculation books nos 1 – 60'; 'Laboratory Book Mr Lawrence's Particulars of Pulping Mangels, Sugar-beet and Swedes, 1898 – 1908. One small notebook

- CHEM1.16** AH Lewis, 1926 –7: Gezira 1 - 3, I-III. *Six notebooks*
- CHEM1.17** FA Manning, 1850s: 6 – 10, progress of analysis and untitled. *15 notebooks in three bundles including notes, possibly by Vaux, on sheep experiments*
- CHEM1.18** NHJ Miller, late 19th, early 20th century: *Three bundles of 17 untitled notebooks and six other notebooks with label 'chemical analyses and various subjects'.*
- CHEM1.19** NHJ Miller and JJ Willis, 1890s, early 1900s: wheat hybridation experiments and untitled but identified inside as vegetation and pot plant experiments. *Six notebooks*
- CHEM1.20** ES Moore, 1915 – 6: raffinose, soils. *Two notebooks*
- CHEM1.21** G Nagelschmidt, late 1920s – 40s: dehydration curves, fluorin dererminations, shale experiments, F1 – F3 and untitled. *14 notebooks*
- CHEM1.22** AG Norman, 1930s: decompositions, forage crops 1 – 3, hemicelluloses I-IV (one from JG Shirklands) old motor tyres, pectin 1. *10 notebooks*
- CHEM1.23** HJ Page, early 1920s: general literature record, 438 humus, 448 green manuring, 479 nitrogen cycle, 483 various analyses, 549 untitled. *Five notebooks*
- CHEM1.24** HT Richardson, 1926 – 33: analyses, cynamide mustard pots, cynamide storage, experimental, field, germination, grass, leaching, nitrogen uptake, Park Grass, Park Grass II and III, references, soil ammonia and nitrate, winter cynamide decomposition. *16 notebooks*
- CHEM1.25** R Warington, 1870s – 80s, early 1900s: 2 Warington and WA Peake, 3 WA Peake, 4 unidentified, 5 WA Peake, 5 (*sic*) 6, 7 Rothamsted Laboratory Nitrogen Determinations by E Grey. *Seven notebooks; see series RWJ, papers of Robert Warington junior, 1838 – 1907 for other Warington notebooks*
- CHEM1.26** AJ Walker, late 1920s: ammonia and urea, germination experiments, nitrates and untitled. *Five notebooks*
- CHEM1.27** A Walkley, 1900 – 33: C&N, CO₂, hypobromite, nitrogen and carbon, Robinson carbon etc. *32 notebooks including one from*

JA Black, labelled CO₂.

- CHEM1.28** RG Warren, 1926 – 37 and Joan Hellyer 1938 – 9: basic slag pot experiments, calcimeter, chemistry carbon determinations, N on sugar beet, phosphate, saturation capacity, carbon for Mr Weston. *21 notebooks plus loose pages*
- CHEM1.29** W Williams, 1920s: 601 replaceable bases, other notebooks untitled or with titles referring to Broadbalk, Park Grass, Woburn, East Halton and Alkborough. *14 notebooks*
- CHEM1.30** A Appleyard, 1912-1915: 184, 208, 243, 266, 290, 303 soil gases (I-VI), 198 nitrogen loss, 232 evacuation and soils, 288 respiration coefficients, 292 untitled (included counts of bacteria). *10 notebooks; out of alphabetical sequence because not deposited in the archive until 2012.*
- CHEM2** **Archives transferred in summer 2000**
- CHEM2.1** Analysis sheets 1 – 7896. 1 – 3000 and S7003 – S7846 are in folders and the remainder are loose; some numbers are missing. *10 boxes; see also Warren*
- CHEM2.2** CR589 – 1391 (some numbers missing) plus two volumes with titles 'K fixation' and 'determination of potassium with CaCl₂, determination of calcium & magnesium with E.D.T.A'. *18 boxes*
- CHEM2.3** C 1 – 25 (all numbers, plus C7a, C9a, C12a, C12b, C15a, c15b, C21a, C21b): data from the Classical Experiments, some of which probably duplicate items in the PROD series. Box 12b contains botanical notebooks from the 1860s and 1870s, which may overlap with items in EXP 4.11. *32 boxes; some of the files in the second box marked C9 may belong elsewhere. They have been kept together as they were received together. An undated note on the original box said 'C30 transferred to box containing B17 etc.'*
- CHEM3** **Miscellaneous**
- CHEM3.1** Outside Experiments 1941: town refuse series, Tunstall liming 10th season; Sugar beet NPK observations; NPK school microplot series. *One binder*
- CHEM3.2** Proposals for Barnfield and Drainage – Barnfield Pit, c1973. *One envelope*
- CHEM4** **Weighbridge books and surveys**
Other weighbridge books are in FARM7
- CHEM4.1.1** **H1**
Weighbridge books for root crops, mainly Barnfield mangolds, 1870s – 1920s. *One box*

- CHEM4.1.2** Weighbridge books for hay, 1929 – 41 and roots, 1932 – 52.
One box
- CHEM4.2** **CW1**
Correspondence, data, reports and sampling instructions for commercial wheat, 1933 – 9, plus one folder on commercial oats, 1936 – 7. *One box*
- CHEM4.3** Data for precision barley at Rothamsted and precision oats at Harper Adams, 1930s. *One box with contents labelled 'from stats. Lab 1940'*
- CHEM4.4** Data for the National Wheat Survey, 1960s. *One box*
- CHEM5** **Archives of staff members**
- CHEM5.1** **John Bolton**
Data etc relating to work on R&W C[rop] S[equence] [Experiments] 10 and on trace elements and speciation liming effects. *Six boxes*
- CHEM5.2** **AH Bunting**
- CHEM5.2.1** Correspondence, figures and reports on experiments by AH Bunting and others on use of town refuse and sewage as fertilizer, 1940s. *14 folders in poor condition in one box*
- CHEM5.2.2** Bulky organic manure samples, 1943 – 5: data from work done by H Nixon and MJ Allen on bulky organic manure experiments, 1945 – 50.
Statistics Department copy of data from sewage sludge experiments, 1942 – 7.
Cards, 1930s and 40s, in modern envelope with title 'bulky organic manure sheets' and card index in bundle with title 'organic manures analyses 1942 – 3'. *Two boxes from box with title 'bulky organic manures'*
- CHEM5.3** **EM Crowther**
- CHEM5.3.1** Conference of Advisory Chemists Fertilizer Sub-Committee: papers relating to the allocation of fertilizers in wartime, 1941 – 4. *16 folders from box previously labelled 'Draft allocation of fertilizers' with former numbers 98 and 125*
- CHEM5.3.2** Letter from Crowther to the Ministry of Agriculture and correspondence between Crowther and Mann on work at Woburn, 1941 – 52. *Four folders previously labelled 'Woburn' with former numbers 80 and 132.*
- CHEM5.3.3** Biology War Committee and Pirie Sub-Committee: minutes, agenda and memos, 1942 – 3. *10 folders from box previously labelled 'Allied Post War requirements bureau' with former numbers 64B and 136.*

- CHEM5.4 NHJ Miller**
 Details of work on rainfall and atmospheric pollution, including notes on the work of others from the 1840s onwards, 1880s – 1920s; monthly tables on Rothamsted rainfall, 1870s to 1915; letters and tables on countrywide and worldwide rainfall and pollution, late 19th and early 20th centuries; reports and circulars of the Committee for the investigation of Atmospheric Pollution, 1906 – 20. *Two boxes*
- CHEM5.5 HL Richardson**
 Two bundles of notes and results from experiments on nitrates, 1930s, 40s (including data from Classical Experiments). *One box*
- CHEM5.6 RG Warren**
- CHEM5.6.1** Crops analysis, 1930s – 50s; soil analysis, 1930s – 50s; trace element analysis, 1953 – 4. *18 files from box previously labelled 'files on analysis'*
- CHEM5.6.2** Analysis of bulky organic manures, 1930 – 60s. *16 files from box previously labelled 'bulky organics analysis'*
 Phosphate experiments, bulky organic manure experiments and concentrated organic manure experiments, 1930s – 50s. *Seven files from box previously labelled 'reprints, crops, weeds'*
- CHEM6 Reference Plots**
- CHEM6.1** Rothamsted Reference Plot 1, 1959 – 86. *Five green binders and one pink binder*
- CHEM6.2** Rothamsted Reference Plot 2, 1960 – 85. *Five binders*
- CHEM6.3** Woburn Reference Plots, 1960 – 79. *Five green binders and one blue binder*
- CHEM6.4** Grazed Reference Plots, 1959 – 73. *One binder*
- CHEM6.5** Rothamsted Reference Plots, Crops, 1956 – 75. *One binder*
- CHEM6.6** All Reference Plots, 1950s, 1960s. *Two binders, one black, one red*
- CHEM7 Lists**
All photocopies, originals held by Andy Macdonald.
 List of Laboratory notebooks commencing 1902': 1 – 802, with many gaps, 1903 – 35. Some notebooks listed are among CHEM1.1-CHEM1.30.
 'List of numbered notebooks in the Botanical Department': numbers 3 – 805 on the numbered notebooks list, with many gaps, 1903 – 35, some notebooks listed are now in BOT1 in the Botany department records.
 'List of numbers in Chemistry Routine (CR) notebooks, 806 – 1416': some notebooks listed are in CHEM2.2, 1936 – 99.
 'List of notebooks used for farm samples', numbers 1–26, 1929 – 35

'Research Notebooks RG Warren': numbers 1–14, 1931– 6
T1–T4, 1947, with note saying issued for Forestry and analysis
recorded in CR books.

P.5b Superphosphate Water Soluble Phosphoric Acid (no more
details). *All the lists are in one bundle, stored loose*

CHEM8 Reports on work by Rothamsted staff, especially EM Crowther,
for RES and other bodies, eg the ARC, late 1930s – 1960s.
Three boxes, see list

CHEM9 **Archives transferred autumn 2009**

CHEM9.1 Saxmundham computer sheets for 82/S/RN/2, 1974 – 82. *One
parcel labelled 'duplicates' and 'AE Johnston'.*



ROTHAMSTED
RESEARCH

Library & Archives

DIRS

Directors after 1943

Extent and form:	Four boxes of modern papers in good condition.
Administrative history:	Created by post-1943 directors, i.e. after EJ Russell
Custodial history:	Stored in directors' offices at Rothamsted or with their families
Accruals:	Acquired at random from directors' secretaries and families.
Existence of copies:	Copies of circulated material likely, at Rothamsted and with retired staff members
Related material at Rothamsted:	ADH and RUS for pre-1943 directors' papers and STF 39 for Bawden obituaries. There has been no significant or regular transfer of post-1943 directors' papers to the library archives so there may be related material
Related material in other repositories:	The Royal Society has papers of Sir Frederick Bawden.
	Updated : 1 October 2012

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

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The Rothamsted directors from the mid 1940s to the late 1980s were:

- Sir William Gammie Ogg, 1943 – 58
- Sir Frederick Bawden, 1958 – 72
- Sir Leslie Fowden, 1973 – 88
- Kenneth Treharne, 1988 – 9.

Unlike Sir John Russell, Ogg's immediate predecessor, they did not leave large quantities of personal and administrative papers in the Library Archives.

There are no papers of the directors after K Treharne, ie since 1989, in the Library Archives.

The documents described below have not been numbered individually in case others are found and sent to the Library Archives.

DIRS1 WG Ogg

Correspondence on training agricultural research workers, farewell party for E Havelock of the ARC, fertilizer bags, fungicides, Russian teaching by Dr Novakowski and general matters, 1944 – 58. *One small bundle*

Programmes of work (summaries of work in progress and immediate plans), 1944 – 61. *One bundle*

Applications for research grants received by Ogg for approval or information and retained by later directors: large scale separation of leaf protein, 1949 – 68; biological activity of different strains of pyrethrum flowers, 1952 – 63; succession of fungi in mouldy hay, 1958 – 60. Most of the information concerns grant applications and receipts but some also refers to the aims and progress of the work. *Three bundles tied as one bundle*

Photographs possibly 1950, taken by the Sport and General Press Agency; correspondence with DHG Ogg about the painting of WG Ogg (his father) at Rothamsted, 1984. *One small folder*

Portrait etching by Christopher Perkins, 1958. *Framed, stored understairs in annexe*

DIRS2 FC Bawden

Correspondence, including letters on Home Office Warning and Monitoring Organisation (for radioactivity), National Productivity Year, use of NMR spectrometer, economic benefits of agricultural research, AFRC information services and zinc in water, 1961 – 9. *One small bundle*

Correspondence relating to the deposit of Bawden's papers at the Royal Society and a copy of the Contemporary Scientific Archives centre listing. *One folder*

DIRS3

L Fowden

Letters of congratulation and newspaper cuttings on appointment as Director, 1972. *One folder*

Minutes, notes and reports of the RAPAC Working Party on Crop Protection, 1970s, 1980s. *One folder*

Correspondence of the Director and others with the National Research Development Corporation, later the British Technology Group, including letters on the Agricultural Genetics Company, electrostatic crop spraying, mycorrhizal root production, patenting and the work of NW Pirie, pyrethrins, water supply and the Wittewronge portraits, 1972 – 85. *One folder*

Correspondence, mainly with the LAT committee, on committee membership and constitutional arrangements, assets, financial matters, employment, maintenance, sales, site developments etc., 1976 – 88. *Two folders*

Informal general correspondence with LAT committee on awards and honours and on routine matters, eg meeting arrangements, 1977 – 88. *One folder*

Notes, submissions and correspondence on present and future research, late 1970s, 1980s. *One folder*

Correspondence with R Shephard about painting L Fowden for Rothamsted, 1987. *One folder*

Drafts and notes for speeches and papers, 1980s, 1990s and undated, including

Adelaide

Agrotechnology, past, present and future

Amino acids: production by plants and the requirements of man

Balanced use of chemicals

Biotechnology in agriculture and food production

Impact of John Monteith's research on world food production

Prospect for greater diversity in future utilization of plants

Utilizing science in agricultural practice: past successes, future challenges

Various addresses of welcome, mainly handwritten

Visits to Brazil and Uruguay, China, Greece, Hong Kong. *One large bundle*

Photographs of events and presentations, 1970s – 80s and undated. *One bundle*
Total two boxes

DIRS4

KJ Treharne

Correspondence, mainly with MPs on 'Keeping the Balance' (nitrates, fertilizers and water supplies) 1989. *One folder*



ROTHAMSTED
RESEARCH

Library & Archives

DRAF

Papers relating to experiments, talks and work by JB Lawes and JH Gilbert, 1840s – 1900

Extent and form:	Seven boxes, mainly paper documents in reasonable condition
Administrative history:	Created in the course of work at Rothamsted Laboratory
Custodial history:	Stored in laboratory, 1840 onwards; in annexe strongroom before 1984
Accruals:	Unlikely
Existence of copies:	None known
Related material at Rothamsted:	None known
Related material in other repositories:	None known
	Updated 1 December 2011

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

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The DRAF series is a miscellaneous collection that includes notes by Lawes and Gilbert on a variety of topics, including their own experiments, that did not necessarily become printed papers or talks. It also includes their notes on the work of others, including people who criticised their work; newspaper cuttings on a range of subjects, including the Rothamsted jubilee in 1893 and some stray reports and figures that may have become separated from their original bundles.

Other archives of experiments are in the PROD and EXP series

- DRAF1** Rough undated notes by JB Lawes for talks and articles on fertility and soil exhaustion, population and food, London sewage, turnips, fish manure and guano, sheep feeding, barley and wheat, clover disease and other topics. *One bundle*
- DRAF2** Report by JB Lawes on 'Experiments on Rothamsted farm, Herts in 1843 and 1844 on the Growth of Turnips', printed in the Gardeners' Chronicle, 1845. *One notebook*
- DRAF3** JH Gilbert's draft remarks on 'On the Fairy-Rings of Pastures as illustrating the use of Inorganic manures by Way', JRAS 7, 1846. *One bundle*
- DRAF4** JH Gilbert's draft remarks on 'On the Present State of Agriculture and its relations to Chemistry by Prof Johnson', JRAS 9, 1848. *One bundle*
- DRAF5** JH Gilbert's draft remarks on 'The Course of Experiments conducted on the Farm of Mr Lawes at Rothamsted, Herts. 1848. *One bundle*
- DRAF6** Draft of 'On the Sources of the Alkalis in Agriculture' for the Farmers' Magazine, 1848 – 9. *One bundle*
- DRAF7** Drafts for a paper on sugar cane, c1847 and for 'On the Selection of Artificial Manures for the sugar-cane', 1864, with letters, notes and pamphlets, 1840s – 60s. *One bundle*
- DRAF8** Notes supplied to the Reverend Edwin Sidney for a lecture on 'The rise of the Sap in the Spring', 1872. *One folder*
- DRAF9** Drafts and notes by JB Lawes and JH Gilbert for replies to criticisms of the Rothamsted experiments by 'R' in the Agricultural Gazette, 1852 – 3. *One bundle*
- DRAF10** Proofs of 'Notes on the Current Method of estimating the Cellular Matter of Woody Fibre in Vegetable Foodstuffs' by Segelcke of Copenhagen and later notes on methods of determining crude and woody fibre, 1859, 1860, 1883. *One folder*

- DRAF11** Notes and correspondence, mainly from Moreton, on experiments on the amount of nitrogen in dates by JH Gilbert and Voelcker, reported in the *Gardeners' Chronicle*, 1860. *One folder*
- DRAF12** Drafts for 'On the Application of Different Manures to different Crops and their proper Distribution on the farm', 1861. *One folder*
- DRAF13** Analysis of Broadbalk soils by H von Liebig, 1865, paper by Liebig on pig feeding with rough translation, and other papers in German, 1862 – 79. *One folder*
- DRAF14** Production papers for 'Experiments with Peruvian Guano mixed with a small Quantity of Sulphuric Acid' and 'Experiments on the Artificial Fecundation of Wheat' with JB Lawes's letters on Peruvian guano referring to his circular 'The Present Position of the Trade in Peruvian Guano', 1871. *One bundle*
- DRAF15** Draft report on Rothamsted researches, 1867. *One folder*
- DRAF16** Calculations for the Rivers' Pollution Commission report on animal feeding and weights, using Rothamsted data, 1869. *One folder*
- DRAF17** Papers relating to the Rumford Chemical Works against Lauer, a case in the United States on a patent bread making powder, with JB Lawes's answers to cross examination, 1870. *One bundle*
- DRAF18** Production papers for 'Scientific Agriculture with a view to Profit, a lecture by JB Lawes to the Maidstone Farmers' Club, 1870. *One folder*
- DRAF19** Correspondence, notes, reports and tables on experiments on different manures in the RHS gardens, Chiswick, later printed in the *Proc. Roy. Soc.*, 1870. *One bundle*
- DRAF20** Notes on Rothamsted experiments on nitrogenous manures, 1871 – 5. *One folder*
- DRAF21** Drafts of JB Lawes's notes or letters on 'Mr Randell's Motion' relating to the Landlord and Tenant Bill, c1875. *One bundle*
- DRAF22** Account of Rothamsted Agricultural Experimental Station, prepared for the commemoration of the first experimental station in Mockern, Germany, 1877. *One bundle*
- DRAF23** Production papers for JB Lawes's address on 'Freedom in the Growth and sale of the Crops of the Farm' for the *Jour. Soc. Arts.* *One bundle*
- DRAF24** Production papers for 'Is Higher Farming a remedy for Lower Prices?' a lecture by JB Lawes to the East Berwickshire Agricultural Association', 1879. *One bundle*

- DRAF25** Production papers for 'Sketch of the Progress of Agricultural Chemistry' Rep. Brit. Assn., 1870. *One bundle*
- DRAF26** Production papers for 'Notes on some Conditions of the Development and of the Activity of Chlorophyll, Rep. Brit. Assn., 1885, with some notes headed 'Swansea 1880', 1885. *One bundle*
- DRAF27** Article by de Laune on tobacco, JRAS 2nd series 23, part 1, 1887 and JB Lawes's notes. *One bundle*
- DRAF28** Letters by JB Lawes to the Agricultural Gazette on fertility (not a complete series) with critical letters from 'Enquirer', 1881. *One bundle*
- DRAF29** Figures for drainage, rainfall, prices and produce, with related notes for JB Lawes's evidence to the Commission on Agricultural Distress', 1874 – 81. *One bundle*
- DRAF30** Production papers for JH Gilbert's memoir on A Voelcker's life and work, JRAS 2nd series 21, 1885. *One bundle*
- DRAF31** Production papers for JB Lawes's article on Peasant Proprietors and for JH Gilbert's on 'The Average Yield of Wheat per acre in Different Countries, 1885 – 7. *One bundle*
- DRAF32** Production papers for 'The History and Present Position of the Rothamsted Investigations, 1891. *One bundle*
- DRAF33** Production papers for 'Allotments and Small Holdings' JRAS 2nd series 3, with data from 1870 onwards and a list of allotments and allotment holders in Harpenden, 1892. *One bundle*
- DRAF34** Letter from JB Lawes and draft of paper on 'Nutritive Rations' for the Agric. Students' Gazette, 1892. *Two items*
- DRAF35** Production papers for 'The Rothamsted Experiments over Fifty Years' Trans. Highland and Agric. Soc. of Scotland, 7, 1895. *One folder*
- DRAF36** Drafts for an unpublished paper on 'Historical, Critical and Experimental Enquiry into the Chemical Statistics of the Animal Body, with Special Reference to the Question of Whether Animals either assimilate or exhale free Nitrogen', with a note that some data was used for 'The Feeding of Animals for the Production of Meat, Milk and Manure and the Exercise of Force', JRAS 3rd series 6, 1895. *One bundle*
- DRAF37** Notes on barley production and imports, arising from JH Gilbert's membership of the Beer Materials Committee, 1897 – 8. *One bundle*
- DRAF38** Transactions of the Banffshire Field Club with an article by Milne on Soils, referring to Rothamsted, 1899. *Two items*

- DRAF39** Proofs for papers by JB Lawes on mangels, red clover, lime, weeds, the Scottish Chambers Land Bill, soil, artificial food, Burnyeat versus the Earl of Lonsdale, artificial manures, cow products, ploughing green crops, Joulie on nitrogen, manure for sugar cane and sulphate of ammonia, with a few newscuttings, most undated, some 1880s. *One bundle*
- DRAF40** Corrections of experimental farm sheets, 1869 – 75 and notes to accompany annual revisions of the Memoranda, 1876 – 1900. *One box*
- DRAF41** Newspaper cuttings on visits to Rothamsted and on JB Lawes and JH Gilbert, 1868 – 1901. *One bundle*
- DRAF42** Newspaper cuttings on events in Rothamsted and Harpenden, 1875 – 88. *Three volumes*
- DRAF43** Extract from the Gardeners' Chronicle on JB Lawes's turnip experiments in 1843 and 1844 and article on Rothamsted, 1877. *One bundle*
- DRAF44** Correspondence, invitations etc for Jubilee, 1893 and a few items on JB Lawes and JH Gilbert's Cambridge degrees, 1894. *One bundle*
- DRAF45** Newspapers describing the Rothamsted Jubilee and music for the Rothamsted anthem, 1893. *One bundle*



ROTHAMSTED
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EXH

Exhibitions, 1870s – 1920s

Extent and form:	Two boxes, mainly paper documents in reasonable condition
Administrative history:	Found in the annexe strongroom or elsewhere at Rothamsted, 1984 onwards
Custodial history:	Mainly in annexe strongroom before 1984
Accruals:	Possible
Existence of copies:	None known but may exist for the printed items
Related material at Rothamsted:	None known but possible.
Related material in other repositories:	None known
	Updated 1 December 2011

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

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This small group of papers was formed by bringing together items found at random in the 19th century archives in the Annexe strongroom and probably survives from a few only of the exhibitions in which Rothamsted took part.

Although the main way of making Rothamsted's work known was by publication in scientific journals, other ways included talks by both Lawes and Gilbert, Gilbert's attendance at scientific conferences, the distribution of photographs and offprints to scientific institutions worldwide and, as shown below, providing items for exhibitions.

- EXH1** Diagrams, letters and tables relating to Rothamsted items exhibited in Moscow, 1872. *One folder*

- EXH2** Correspondence with JH Gilbert on loans to an exhibition of scientific instruments at South Kensington, 1876; list of Rothamsted items in glass case at S.K, 1872. *One bundle*

- EXH3** Correspondence and notes on Rothamsted 's loans and gifts to Hertfordshire County Museum, c1889, plus some figures from experiments, probably unrelated.. *One folder*

- EXH4** Papers relating to Rothamsted exhibits at an exhibition in Chicago, later also displayed at South Kensington Museum, 1893 – 4. *Three bundles*

- EXH5** Programme for Royal Agricultural College, Cirencester, jubilee celebrations and list of Rothamsted items exhibited at the 'conversazione', 1895. *One folder*

- EXH6** Particulars of Rothamsted exhibits at the Paris International Exhibition, 1890s. *Two bundles*

- EXH7** EJ Russell at the Rothamsted stand at an exhibition in Regina, Canada, 1933. *One photograph*

- EXH8** Rothamsted stand at the Royal Show, Newport, 1927. *One photograph*



ROTHAMSTED
RESEARCH

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EXP

Other records of experimental work, 1840s onwards

Extent and form:	11 boxes, mainly paper in reasonable condition, 16 loose volumes (worn by use), 10 rolled plans (large and dusty) in bag, one large volume, one large folder
Administrative history:	Created in the course of scientific work at Rothamsted
Custodial history:	Boxes and volumes in annex strongroom before 1984; volume and folder transferred from rare books room, 1990s, plans found in Library attic, 2000.
Accruals:	Unlikely
Existence of copies:	Copies of the White Books are in the Library
Related material at Rothamsted:	None known
Related material in other repositories:	None known
	Updated: 1 December 2011

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

Systematic records of the experimental work were kept at Rothamsted from the beginning of Lawes' and Gilbert's partnership in 1843. The formal record was in the White Books while other notes were made in Green Books. The series of white books continues in 2011 although in a different format.

The EXP series also includes plans and miscellaneous notes and tables. Other archives of experiments are in the DRAF and PROD series

EXP1 White books

- EXP1.1** Broadbalk wheat, 1843 – 59. *Three volumes, one with spine damage*
- EXP1.2** Geescroft cereals and legumes, 1847, 1886, 1964. *One volume*
- EXP1.3** Agdell rotations, 1949 – 59. *One volume*
- EXP1.4** Hoosfield barley, 1852 – 1959. *One volume*
- EXP1.5** Park Grass, 1854 – 1959. *Two volumes*
- EXP1.6** Park Grass botanical notes by WB Hemsley, 1872 – 3 and other botanical notes by Willis, 1866 – 71 and Keenan, 1867, report by Willis and JH Gilbert on Hemsley's work, notes on climate, 1855 – 72 and on the effect of climate on grass experiments, 1874. *One volume*
- EXP1.7** Notes on Barnfield swedes, Smith's wheat, Hoosfield clover, Rothamsted garden clover, Lawes's lawn, Little Hoos barley, Sawpit mangolds, Rothamsted Park sheep, soils, Hoosfield legumes and on short-term experiments, 1870 – 1923. *One volume*
- EXP1.8** Barnfield sugar beet and mangold wurzel experiments, 1871 – 1959. *Two volumes*
- EXP1.9** Long Hoos green manuring experiments, Hoosfield wheat and Hoosfield exhaustion land, 1914 – 59. *One volume*
- EXP1.10** Replicated experiments, 1928 – 59. *Three volumes*
- EXP1.11** Rotations I and II, 1930 – 54 and 1930 – 60. *One volume*
- EXP1.12** Long Hoos Three Course Rotation, 1932 – 58, Periodic Cultivation, 1933 – 9 and Two Course Rotation, 1942 – 58. *One volume*
- EXP1.13** Woburn Ley Arable Rotation, 1938 – 54 and Market Garden Experiment, 1942 – 53. *One volume*
- EXP1.14** Deep Cultivation Rotation Experiment, 1943 – 59. *One volume*
- EXP1.15** Ley and arable rotation experiments in Highfield on old permanent grass and in Fosters on old permanent arable, 1949 – 59. *One volume*

EXP1.16 Chemical notes on gas in plants and taking nitrogen from the air, 1857 – 8. *One volume*

EXP2 Green Books

EXP2.1 A Notes on animal feeding experiments, 1840s, 1850s. *One volume*

EXP2.2 – 6 B, C, E, F, H Notes and figures on classical and other experiments, 1840s, 1850s. *Five volumes, E with slight fire damage*

EXP2.7 – 10 I, L, N, O Tables of dry matter and ash determinations, 1840s, 1850s. *Four volumes*

EXP2.11 Notes on green books B and I, 1840s, 1850s. *One folder in box with EXP1.12 – EXP1.16*

EXP2.12 AA Notes on nitrogen assimilation experiments, 1857 – 8, carried out by Evan Pugh and possibly written by him. *One volume*

EXP2.13 Unused white and green books and unused volume with title 'Rothamsted Fruit Station Plots'. *Six volumes*

EXP3 Plans

EXP3.1 Plans, partly in watercolour, of plots in Agdell, Barnfield, Broadbalk, Hoosfield, Park grass and the drain and rain gauges, early – mid 1890s. *Eight large rolls, including duplicates, paper on canvas, moderate condition, grubby, found in Library attic in 2000*

EXP3.2 'Maps of the Rothamsted Fields 1912 – 33: details of soils, cropping and manuring, late 19th century – 1930s. *One large volume; colour prints or slides of frontispiece and of pages 1 – 10, 44, 72, 97 – 9, made in 1994, are stored in STF35*

EXP3.3 Plans of cropping and other experiments, 1934 – 43, partly continuing EXP3.2. *One large folder*

EXP4 Other notes

EXP4.1 Tables for leguminous crops in Geescroft, 1847 – 83. *One bundle*

EXP4.2 'Rothamsted Experimental Fields Sketches and Descriptions 1893'. *One notebook with modern cover*

EXP4.3 'Little Hoos experiments on Potatoes and Swedes etc commencing 1904'. *One exercise book*

EXP4.4 Notes by JB Lawes on experiments on water given off by plants, 1842 – 55. *Four notebooks*

EXP4.5 Annual bundles of data from experiments on water given off by plants during growth, 1849 – 58. *One bundle*

- EXP4.6** Notes and figures from pot experiments, including work at Woburn and Saxmundham, early 20th century. *One folder*
- EXP4.7** Lists of samples, descriptions of methods and results of ash analyses carried out by Richter, 1850s – c1900. *One folder, three bundles*
- EXP4.8** Notes on clover, barley and other experiments in Little Hoosfield, 1840s – 1920s. *Two bundles*
- EXP4.9** Analysis by Richter of the ashes of bean plants in Claycroft, 1854. *One folder*
- EXP4.10** Notes and figures on experiments on nitrogen in wool refuse, 1860s. *One folder*
- EXP4.11** 'Mr Richter's botanical notes' on Park Grass, Broadbalk, Hoosfield and bean ground in Geescroft Field, Broadbalk wheat, Hoosfield barley and Rothamsted grass, 1860s. *Eight small volumes*
- EXP4.12** Notes on tartaric and citric acid manufacture, 1867, probably from Lawes' Millwall factory. *One folder*
- EXP4.13** Correspondence, notes and tables relating to James Mason's experiments at Eynsham Hall, Witney, Oxfordshire, on leguminous plants and nitrogen, clay subsoils and animal feed, c1880 – c1900. *One bundle*
- EXP4.14** Determinations of percentages of nitrogen as albuminoids and of total nitrogen in Rothamsted Park hay, Hoosfield potatoes and Barnfield mangolds, 1870s. *One folder*
- EXP4.15** Determinations of nitrogen and estimates of chlorophyll made by WJ Russell using samples from Rothamsted and Market Harborough, Leicestershire, 1882. *One folder*
- EXP4.16** Reports on investigations of cellulose in Rothamsted samples by Hodgkinson, Cross and Bevan at Kew, 1882. *One folder*
- EXP4.17** Hoosfield potato experiments, 1876 – 1901: tables, working sheets, particulars of sampling, weights and correspondence. *One box*
- EXP4.18** Correspondence on soil and leguminous seed samples, directions for making plant food, notes and tables, 1888 – 94. *One bundle*
- EXP4.19** Notes and tables on leguminous plants grown in pots, 1890 – 1. *One bundle*
- EXP4.20** Notes and tables on glasshouse leguminous pot plant experiments, 1898 – 1901. *One bundle*

- EXP4.21** Estimates of ash constituents supplied and removed in Agdell rotation crops, Hoos leguminous crops and Barnfield mangolds, 1896. *One folder*
- EXP4.22** Notes and tables on application of bicarbonate of ammonia to some Rothamsted experimental plots, 1900, 1901. *One folder*
- EXP4.23** Notes and tables of dry matter and ash determinations in Rothamsted fields, 1902 – 8. *One bundle*



ROTHAMSTED
RESEARCH

Library & Archives

FARL

**Friends of Rothamsted
Long Ashton Members' Association
Arable Research Institute Association
Rothamsted Research Association
1980s onwards**

Extent and form:	Two boxes of modern papers in good condition
Administrative history:	Created by the organisations concerned.
Custodial history:	Kept at Rothamsted and transferred to the Archives in April 2009
Accruals:	Printed reports etc are received by the Library and transferred to the archives.
Existence of copies:	Likely, at Rothamsted and elsewhere.
Related material at Rothamsted:	None known but likely
Related material in other repositories:	Long Ashton Research Station archives at Bristol University
	Updated 12 December 2011

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

The Friends of Rothamsted was established in 1983. In 1990 it merged with the long established Long Ashton Members' Association to become the Arable Research Institute Association/ARIA.

When Long Ashton closed, ARIA became the Rothamsted Research Association/RRA. RRA is still active in 2011 and provides a successful forum for the exchange of information between research and the agricultural industry.

The purpose of these three organisations was and is to aid such knowledge transfer between the scientific agricultural community to farmers, growers, advisers and the agricultural industry.

FARL1 Friends of Rothamsted

FARL1.1 Administrative papers

FARL1.1.1 Minutes and agendas, 1983 – 90. *One folder*

FARL1.2 Newsletters, programmes, reports etc

FARL1.2.1 Newsletters 1 – 8, 1991 – 89/90. *One folder*

FARL2 Long Ashton Members' Association

FARL2.1 Administrative papers

FARL2.1.1 Memorandum and Articles of Association regarding Special Resolution, 1983. *One pamphlet*

FARL2.2 Newsletters, programmes, reports etc

FARL2.2.2 Meeting programmes, 1986 – 90. *One folder*

FARL3 Arable Research Institute Association

FARL3.1 Administrative papers

No administrative papers have been transferred to the Archives

FARL3.2 Newsletters, programmes, reports etc

FARL3.2.1 Newsletters, 1990/1 – 2000. *One bundle*

FARL3.2.2 Meeting programmes (Rothamsted, Long Ashton, Broom's Barn) 1990 – 8. *One bundle*

FARL4 Rothamsted Research Association

FARL4.1 Administrative papers

No administrative papers have been transferred to the Archives,

FARL4.2 Newsletters, programmes, reports etc

FARL4.2.1 Newsletters, 2001 onwards. *One folder*



ROTHAMSTED
RESEARCH

Library & Archives

FARM

Farm, mid 19th century onwards

Extent and form:	47 boxes and about 200 loose binders, exercise books and volumes.
Location:	Store
Administrative history:	Created at Rothamsted.
Custodial history:	Kept at the Farm and transferred to the Archives at intervals from 1984 to 2009.
Accruals:	Likely: the Farm is still active.
Existence of copies:	Possible, at Rothamsted and elsewhere eg among papers of former staff
Related material at Rothamsted:	See also Field Experiments/FX
Related material in other repositories:	Unlikely
	Updated: 7 June 2011

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

The series of farm records is one of the longest in the archives as it begins in the mid 19th century and is still being added to in 2011. The early experiments were carried out on the Lawes estate's Home Farm and until 1911 the records cover both experimental and routine farm work. In 1911 the Farm came under the control of the LAT//Rothamsted Experimental Station and a farm manager was appointed. In 1983 the farm became part of the Agronomy and Crop Physiology Division; there have been further administrative changes since then and in 2011 the Farm is one of Rothamsted's technical support services.

The archives below cover administrative, experimental and financial matters.

FARM 1 – 16 Farm diaries, notebooks, reports and tables

FARM1.1 – 4 Notes by F. Bassil, on work on the Farm, experimental plots and in the Laboratory plus notes on labour, rain gauges and weather and notes by JB Lawes on Bassil's work, 1850s. *Four volumes*

FARM1.5 Notes by G. Knott on farm work, labour, sheep experiments and the weather, 1853 – early 1854. *One volume*

FARM1.6, 7 'Notes in connection with the Experimental Crops and Fields' by JJ Willis, 1867 – 70. *Two notebooks*

FARM2 Farm diaries, 1912 – 98. *87 volumes*

FARM3 Field plots/field experiments diaries (mainly B Weston's), 1927 – 2001, excluding 1940. *75 volumes*

FARM4 Notebooks (the earlier ones mainly B Weston's) with crop weights, cultivation plans, drilling, field notes, manure weights, weedkiller rotation, rough calculations and memoranda. 1910 – 1970s, with gaps. *Numerous small notebooks in five boxes, the last of which contains notebooks titled "cultivation weed killer rotation" and one green binder (70/R/RN/8)*

FARM5 Pocket diaries (B Weston's) 1920s – 50, with gaps. *24 small diaries in one box; information in these diaries is often but not always repeated in the Field Plot diaries.*

FARM6 Other diaries: weather and farm work, 1927 – 8; crop book and field operations record, 1911 – 20s; experimental fields, 1928 – 33; stock, 1944; cultural operations, 1944 – 56; sheep and grazing experiments, 1951; field diary, 1950s. *Four volumes, one folder, three binders. These diaries were found individually among various different transfers of farm records and further examination may show that some could be added to existing series.*

FARM7 Weights of crops at carting, mainly Park Hay (weighbridge books) 1862 – 1928. *Thirteen folders in one box*

- FARM8** Dairy records: figures for cows' food consumption and milk yields, calving times and other statistics, with notes on other diary experiments, eg at Saffron Walden and by the Aylesbury Dairy Company, 1884 – 90. *Four boxes*
- FARM9.1** Harvest books, 1890s – 1940s. *11 boxes; there are gaps in the early 1920s and these books may be with the archives held by the former Statistics Department as other missing volumes have been found there.*
- FARM9.2** Harvest and weight books, 1969 – 2005 (some years missing). *Two boxes*
- FARM10** Manure tables, late 19th century – 1950s: Agdell, Barnfield, Broadbalk, Great Hoos, Hoosfield, Little Hoos, Long Hoos, Park Grass, Woburn, Two Course Rotation, Cultivation Rotation, miscellaneous, outside centres. *Two boxes*
- FARM11.1 – 5** Threshing results, 1902 – 4, Barnfield, Hoos Barley and Little Knott; straw weights at threshing, 1913 – 8; threshing results, 1930 – 2, 1940s; description of threshing and sampling, undated. *Two boxes*
- FARM12** Farm reports: Rothamsted, 1914 – 24, 1961 – 77, Rothamsted and Woburn, 1978 – 86. *One bundle, two folders*
- FARM13** Area tables: rough tables of plot area and general notes, eg on Zeppelin raid, 1916, sowing, yields, carting, weeds, weather etc, 1916 – 30. *One bundle*
- FARM14** C. Heigham's notes and diagrams for crops and manures, c1925. *Two notebooks*
- FARM15.1** Field books, 1926 – 59. *One exercise book, six binders*
- FARM15.2** Rothamsted and Scout farms non experimental fields' diaries, 1960 – 92. *Six boxes*
- FARM16** Cattle record books, 1950s – 80s. *Three binders*
- FARM17** **Inventories, purchases and valuations**
- FARM17.1** Notes for farm valuation, 1927. *One notebook*
- FARM17.2** Electrical equipment: catalogues and correspondence, mainly with GEC (General Electric Company) 1930s – 60s. *One large bundle*
- FARM17.3** Correspondence on purchases from Alfred R. Tattersall, milling engineers, 1940 – 1. *One small bundle, including references to items still in use in 2002*

- FARM17.4** Correspondence on purchase of insecticides, 1940s – 50s. *One folder*
- FARM17.5** Inventories, 1940s – 80s. *One bundle*
- FARM17.6** Machinery book, 1950s – 70s. *One binder*
- FARM17.7** Valuations, Rothamsted and Woburn farms, 1987/8, 1991/2; Rothamsted, 1990. *One folder, two notebooks*
- FARM18 Labour**
- FARM18.1** Labour account book for the experimental fields, 1857. *One notebook*
- FARM18.2** Summary of payments at haymaking, 1891. *One item*
- FARM18.3** Costings for farm operations, 1903 – 9. *One bundle*
- FARM18.4** Labour sheets, 1911 – 5, October 1922. *One volume (damaged and dirty), one bundle*
- FARM18.5** Application for farm posts, references, notices and other supporting papers, 1920s – 70s. *Two boxes, contents arranged alphabetically*
- FARM19 Photographs**
- FARM19.1** Photographs, some identified. *One box of 40 hanging slide holders with up to 24 slides, some glass. Not in archive quality packaging*
- FARM19.2** Photographs, mainly of machinery in fields and buildings and also including some photographs of animals and experiments, 1940s – early 1960s. *One album*
- FARM19.3** Photographs of hay fire, 1968. *One folder*
- FARM20 Miscellaneous**
- FARM20.1** Letter to AD Hall on farming and general matters, 1911. *One item*
- FARM20.2** Correspondence, mainly about footpaths and rights of way, plus some details of property maintenance, 1930s – 60s. *One bundle*
- FARM20.3** Talks on the Farm, 1930s – early 1970s. *Seven papers in one folder, one incomplete*
- FARM20.4** Farm notes, 1944 – 54 and Woburn farm notes, 1949. *12 items*

- FARM20.5** Details of farm and experimental work, late 1940s, 1950s, mainly Rothamsted, some Woburn. *One binder*
- FARM20.6** Hertfordshire Cattle Breeders Society: share certificate and passbook, 1947. *Two items in envelope*
- FARM20.7** 'Crib sheet for demonstrations', c1980. *One green binder*
- FARM20.8** Plans of location, outline and siting of field experiments, 1930 – 60s. *One box*
- FARM20.9** Plans and related details of reference posts, 1930s – 70s. *One folder*
- FARM21 Financial**
- FARM21.1** Repair, cash and maintenance book, 1848, 1903 – 19
- FARM21.2.1 – 30** Ledgers, 1911 – 47. *30 volumes*
- FARM21.3** Stock book, 1911 – 23. *One volume*
- FARM21.4.1 – 4** Summary costs and returns and monthly statements, 1911 – 26. *Four volumes*
- FARM21.5** Sales day books, 1911 – 24. *Two volumes*
- FARM21.6** Sales books, 1912 – 29. *Three volumes*
- FARM21.7.1 – 8** Cash books 1915 – 47. *Eight volumes*
- FARM21.8** Purchase book, 1915 – 20 (few entries only). *One volume*
- FARM21.9.1 – 3** Costs books, 1916 – 23. *Three volumes*
- FARM21.10** Petty cash book, 1927 – 36. *One volume*
- FARM21.11** Estate account and farms journal, 1947 – 8 (few entries only). *One volume*
- FARM21.12** Rothamsted and Woburn farms: cash book, 1947 – 51. *One volume*
- FARM21.13** Payments and receipts books, 1948 – 51. *Two volumes*



ROTHAMSTED
RESEARCH

Library & Archives

FX

Field Experiments, 1920s onwards

Extent and form:	45 boxes, about 100 loose binders, exercise books and volumes on shelves and three four-drawer filing cabinets, in adequate condition but not all in archive quality packaging
Administrative history:	Created at Rothamsted.
Custodial history:	Kept in Field Experiments Section until this merged with the Farm. Transferred to the Archives at intervals from 1984 to 2011
Accruals:	Probable
Existence of copies:	Possible, at Rothamsted and elsewhere eg among papers of former staff
Related material at Rothamsted:	See also FARM , MET and WOB
Related material in other repositories:	Unlikely
	Updated 30 November 2011

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

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The role of the Field Plots and Field Experiments committees, groups and working parties was to be a channel or buffer between scientists and the Farm. They appraised and altered proposals, drew up plans and gave instructions to the Farm.

FX1 Field Plots Committee minutes

FX1.1.1, FX1.1.2, FX 1.1.3 Field Plots Committee minutes of meetings 1 – 83, 1924 – 47. *Three volumes*

FX1.2 Field Plots Committee agendas, minutes, summary minutes and papers, 1928 – 43, ending at meeting 69, the director's (EJ Russell) copies. *Two folders*

FX1.3 Field Plots Committee agendas, minutes, summary minutes, reports and papers, 1930 – 45, ending at meeting 81, the farm manager's (B Weston) copies. *Two folders*

FX1.4.1 – 5 Field Plots Committee Executive Sub-Committee minutes of meetings 1 – 153, 1931 – 54. *Five volumes, handwritten except for the last few pages*

FX1.4.6 – 16 Field Plots Committee minutes of meetings 154 – 363, 1954 – 79. *11 folders*

The committee whose minutes form FX1.4 began in 1931 and was known as the Field Plots Executive Sub-Committee until 1944, then after a gap of two years became the New Sub-Committee and from 1948 onwards was called the Field Plots Committee, the responsibilities of the former Field Plots Committee having been taken over by the Staff Council.

A history of the Field Plots Committee by HV Garner from the Annual Report 1961 is stored in the box containing FX1.3 and part of FX1.4.

FX4.1 – 5 are signed minutes, largely handwritten in exercise books and not normally including memoranda. FX4.6 – 16 are typed circulated unsigned minutes, also not normally including memos and are stored in folders; memos are usually with the group or working party that created them.

FX2 Field Plots Committee/Field Experiments Working Party

FX2.1 – 24 Agendas and papers, 1947 – 79, numbered as memoranda from 1954, excluding 1955 – 57; numbers FX2.5, FX2.6, FX2.7 not used, to be used if records are found. *21 folders*

FX2.2 Standing orders, 1924 – 76. *One folder*

FX2.3 Numbers of experimental plots, 1930s – 50s, 1970s – 90s and proposals for crop symbols and code letters, early 1960s. *Three folders*

- FX2.4** Reports of diseases, 1958 – 85. *One folder*
- FX2.5** Sampling requests, 1972 – 93. *One folder*
- FX3** **Working parties**
- FX3.1.1, FX3.1.2** Agronomy Working Party: minutes (memos 1 – 33) 1954 – 67; agendas and papers, 1958 – 67. *Six folders*
- FX3.2.1, FX3.2.2** Cereal Crops and Grass Working Party: minutes (memos 1 – 31) 1967 – 76; agendas and papers, 1967 – 76. *Five folders*
- FX3.3.1, FX3.3.2** Classical Working Party: minutes (memos 1 – 44, then continuing unnumbered), 1954 – 78; agendas and papers, 1958 – 78. *Five folders*
- FX3.4.1, FX3.4.2** Field Experiments Working Party (Farm and Field Experiments Committee from May 1999): minutes (memos 1 – 199) 1977 – 2000; agendas and papers, 1977 – 2002. *Ten folders*
- FX3.5.1, FX3.5.2** Field Methods Working Party: minutes (memos 1 – 28) 1955 – 1976, agendas and papers, 1956 – 78. *Four folders*
- FX3.6.1, FX3.6.2** Pathology Working Party: minutes (memos 1 – 28) 1954 – 67; agendas and papers, 1958 – 67. *Six folders*
- FX3.7.1, FX3.7.2** Root Crops Working Party (successor of Agronomy and Pathology Working Parties): minutes (memos 1 – 15), 1967 – 76; agendas and papers, 1967 – 76. *Three folders*
- FX4** **Groups**
- FX4.1.1, FX4.1.2** Field Planning Group: minutes 1959 – 2001 (memoranda 1 – 83, 1959 – 98, then unnumbered); agendas and papers, 1959 – 2004. *Six folders*
- FX4.2** Long Term Experiments Group: minutes (memos 1 – 6) agendas and papers, 1976 – 9. *One folder*
- FX4.3** Wheat Commodity Group: minutes (memos 1 – 144) agendas and papers, 1977 – 90. *Three folders*
- FX4.4** Barley and Oats Commodity Group: minutes (memos 1 – 107) agendas and papers, 1977 – 90. *Two folders*
- FX4.5** Cereals Commodity Group: minutes (memos 1 – 96) agendas and papers, 1990 – 2006. *One folder*
- FX4.6** Beans and Pulses/Legumes and Forage Commodity Group: minutes (memos 1 – 56) agendas and papers, 1977 – 90. *Two folders*

- FX4.7** Grass Commodity Group: minutes (memos 1 – 16) agendas and papers, 1977 – 84. *One folder*
- FX4.8** Oilseeds Commodity Group: minutes (memos 1 – 41) agendas and papers, 1977 – 90. *One folder*
- FX4.9** Oilseeds, Legumes and Forage Commodity Group: minutes (memos 1 – 88) agendas and papers, 1991 – 2005. *One folder*
- FX4.10** Potatoes/Potatoes and Sugar Beet Commodity Group: minutes (memos 1 – 60) agendas and papers, 1977 – 98. *Two folders*
- FX4.11** Mobile Greenhouse Group: minutes and papers, 1974 – 75. *One folder*
- FX5** **Committees and sub-committees**
- FX5.1** **Agricultural Chemicals Sub-Committee (originally Noxious Materials Sub-Committee)**
- FX5.1.1** Minutes, agendas and papers (meetings 1 – 61) 1958 – 2002. *Three folders*
- FX5.1.2** Lists of acceptable chemical sprays and dusts, 1959 – 81; guide on disposal for sponsors, undated. *One folder*
- FX5.2** **Small Plots/Garden Plots Committee/Garden Plots and Outside Experiments Committee (called Field Research Committee briefly in 1967)**
- FX5.2.1** Scheme for proposed Garden Plots, 1949; minutes, agendas and papers, 1950 – 69. *Two folders*
- FX5.2.2** Requests for use of Garden Plots with supporting notes, details of proposed experiments and letters accepting Garden Plots proposals, 1950s – 60s. *Nine small folders*
- FX5.2.3** Plans, correspondence and experiment details for Garden Plots, 1950s and Ninnings Garden Plots, 1960s. *One bundle*
- FX5.2.4.1** Record of experiments on Garden Plots, 1 – 12, 1960 – 67, arranged by plot number. *One green binder*
- FX5.2.4.2** Record of experiments on Garden Plots, 1 – 15, x and y, 1968 – 81, arranged by plot number. *One green binder*
- FX5.2.5** Record of experiments on Long Hoos III – VII, 1971 – 81, arranged by plot number. *One green binder*
- FX5.2.6** Record of experiments on Long Hoos III – VII and Garden Plots, 1 – 12, x and y, 1982 – 85, arranged by plot number. *One green*

binder

- FX5.2.7** Record of experiments, 1979 – 84, arranged by date and crop. *One brown binder, with note on spine identifying it as a green binder*
- FX5.2.8.1** 'Details of all SPS sites from 1985 onwards'; ending in 1994 and covering Long Hoos III – VII and Garden Plots, 1 – 12, x and y. *One brown binder*
- FX5.2.8.2** 'Green book' 'Computer sheet records of all activities carried out by SPS on all experiments 1985 onwards', ending in 1994. *One brown binder*
- FX5.2.9.1** Diaries, 1967 – 1985, with two each for 1971 – 75 containing similar but not duplicate information. *24 volumes*
- FX5.2.9.2** Diaries covering both Garden Plots/Small Plots and Long Hoos as above, plus work on other fields, 1987 – 2006. *21 volumes*
- FX5.2.10** 'Farm land and outside experiments' brief details of work, eg spraying, weeding, on Farm and elsewhere on site, early 1970s. *One green binder*
- FX6, FX7** **White books**
These binders continue the series EXP1, most of which ends in 1959
- FX6.1** *number not used*
- FX6.2** 'Classicals' 1960 – 74. *Two green binders*
- FX6.3** 'Rothamsted Ley-Arable (RN/1 & 2)' 1960 – 74. *Two green binders*
- FX6.4** 'Crop rotations excluding ley/arable' 1960 – 74. *Two green binders*
- FX6.5** 'Crop sequence' 1960 – 74. *Four green binders*
- FX6.6** 'Annuals' 1960 – 73. *Five green binders*
- FX6.7** Untitled green binders probably continuing FX6.6, 1976 – 92; one binder has the title inside 'white book farm records 1981'. *12 green binders*
- FX6.8** White books, 1993 – 2005. *Six red plastic ring binders, two boxes, one black ring binder*
- FX6.9** 'Results of the Classical and other Long-term Experiments, 2007, 2008. *Two files, containing similar data to white books; see also this title and 'Yields of the Field Experiments, Rothamsted Experimental Station'*

FX7 'White Books Observations Extended or Excluded', early 1960s. *One folder*

FX8 Annual experiments

FX8 Plans, fertilizer sheets and notes relating to annual experiments, mid 1940s – late 90s. *Approximately 3600 folders arranged annually in three four drawer filing cabinets. The folders contain plans and fertiliser sheets for annual experiments, ie those lasting one year only. They have not been examined and remain as they came from the farm in 2003; they are not in archive quality packaging.*

FX9 Other records of experiments

Each title refers to one folder unless otherwise indicated. The contents have been left as they were when they were transferred to the archives, ie they have not been appraised after transfer. Some may contain information duplicated elsewhere and some may belong elsewhere. The folders are not archive quality. Many of them contain non-archive quality papers clips, staples etc.

FX9 first box

2 Course Rotation, 1950 – 9
3 Course Rotation, 1933 – 51
3 Course Rotation, New System, 1952 – 8
4 Course Rotation, 1929-1956. *Five folders*

FX9 second box

6 Course Rotation, R&W, 1930 – 59. *Three folders*
Arable Reference Plots, Great Field IV, Widdowson, Barraclough, Haynes, RN/5, 1961 – 94
Cereal Disease Reference Plots, Pennels Piece, Slope, RN/9, 1966 – 74
Crop Rotations, Great Field I, II, Shield, Hewitt, Payne, RN/22, 1997 – 8

FX9 third box

Cultivation Weed killer, Rothamsted, Great Harpenden I, RN/8, 1960 – 90
Cultivation Weed killer rotation/CW notes, 1960s
Cultivation Weed killer, Woburn, Great Hill, 1960 – 7
Deep Cultivation, Long Hoos I, II, 1944 – 7
Effects of Deep PK, Butt Furlong, McEwen, RN/16, 1974 – 86
Erosion Reference Experiment, Great Hill II, III, Webster, Morgan, Rickson, Styles, RN/20 1988 – 98
Exhaustion Land Data (history 1850s – mid 20th century)
Eyespot Rotation, Little Knott, 1952 – 4
Eyespot Rotation, Long Hoos, 1954 – n 6
Fosters Soil Structure, 1950 – 63

FX9 fourth box

Intensive Cereals, Stackyard I, Johnston, McEwan RN/13, 1966 – 90

Irrigation Plots, Great Field I, II, 1964 – 5
Irrigation Plots, Great Field I, Penman, Moffatt, RN/11, 1964 – 76
Irrigation Plots, Great Field II, Penman, Legg, French, RN/11 1973 – 6
Key to Crop Index Letters, Warren, 1930s – 50s
Liming Recommendations, 1963 – 6
Long term liming, Sawyers 1, barley 1965
Long Term Phosphate, Sawyers, Barraclough, Day, Poulton, Lane, Todd, RN/21, 1993 – 8
Permanent Wheat and Barley, Woburn, Stackyard, 1954 – 63

FX9 fifth box

Plans of Classics (two only: Long Hoos 1903, Hoos Leguminous Plots, undated).
Rates of P&K to the Sub-soil, Meadow, RN/17, 1960 – 88
Reference Plots, Stackyard C, RN/23, 2000 – 5
Residual P, Stackyard Old Classical Site, RN/14, 1968 – 82
Residual Phosphate, Great Field IV, Mattingly, RN/7, 1965 – 81
Residual Phosphate, Sawyers I, Mattingly, Slope, RN/7, 1972 – 81
Residual Phosphate, 1959 – 84
Rotation and Fumigation, Bones Close, Jones et al, RN/15, 1968 – 71
Survival of Wild Oats, 1955 – 61

FX9 sixth box

Wheat Bulb Fly Reference Plots, Great Harpenden I, RN/10, 1963 – 85
Woburn Irrigation, Butt Close, 1956 – 64
Woburn New Green Manuring, Stackyard, 1946 – 67
Woburn Oil Seed Rape Spore Study, Great Field I, II, RN/18, 1984 – 91
Woburn Reference Plots, Stackyard, Widdowson, RN/6, 1960 – 80
Worm Worked Wastes, Ninnings, RN/19, 1980s

FX9 seventh box (*files received 2009 onwards*)

Guide for sponsors, undated, [1970s]
Liming prior to autumn 1976
Liming instructions Rothamsted
Rules for use of garden plots, notes on shed, memo on gardener AC Smith, 1960s. *One folder*

FX9 eighth box (*files received 2011*)

Results of the Field Experiments, 1973. *One box*

FX9 ninth box (*files received 2011*)

Results of the Field Experiments, 1974. *One box*

FX10 Miscellaneous

FX10.1 Treatment plans, Rothamsted and Woburn, book numbers 5 – 8, 1938 – 46. *Three exercise books, indexed, one folder*

FX10.2.1, 2 'Record of the direction of Ploughing', 1949 – 76. *Two volumes*

FX10.3.1, 2 Minor investigations, 1967 – 90. *Two green binders*

FX11 Files transferred 2011

Records of long-term experiments, 1940s – 90s, received from Rothamsted Farm in January 2011 and transferred to the Library Archives by Andy Macdonald in February 2011; details on list. *Two drawers of filing cabinet; list available.*



ROTHAMSTED
RESEARCH

Library & Archives

GIL

Sir Henry Gilbert
1817 – 1901, at Rothamsted 1843 – 1901

Extent and form:	12 loose volumes, 17 boxes and one roll, mainly paper documents in reasonable condition
Location:	Annexe
Administrative history:	Created mainly in the course of a long-term scientific partnership with Sir John Bennet Lawes
Custodial history:	Most items probably always kept at home or laboratory at Rothamsted, some possibly taken from Rothamsted by Mrs Gilbert c1901 and later returned
Accruals:	Unlikely
Existence of copies:	Unlikely
Related material at Rothamsted:	JBL, EXP and PROD and authored and co-authored pamphlets in the Library
Related material in other repositories:	None known or sought but JH Gilbert corresponded widely and lectured in the UK and USA so there could be material in university and other repositories
	Updated 7 June 2011

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

Joseph Henry Gilbert began work at Rothamsted in 1843 when JB Lawes engaged him as a chemist. He stayed for the rest of his life and his scientific partnership with JB Lawes was one of the most valuable and enduring of the 19th century.

Although most of his extensive archive is from his time at Rothamsted it does include a few notebooks from before that and also from his later external work eg as Sibthorpe Professor of Rural Economy at Oxford and a lecturer at the Royal Agricultural College, Cirencester.

Much of the archive is correspondence and it includes letters from a range of scientists and Gilbert's own reports to Lawes from scientific conferences. Other letters are on the progress of experiments, work preparing papers and laboratory management.

- GIL1** Letters from foreign correspondents on scientific work in progress, published papers, requests for information and visits, 1854 – 86. *Two bundles, tied as one*
- GIL2** Correspondence with Evan Pugh and Pugh's notes on his work at Rothamsted, 1856 – 9. *One folder*
- GIL3** Copies of letters from JH Gilbert to JB Lawes, many long and detailed, recording both work in progress and general administrative matters, 1856 – 90. JB Lawes' letters to JH Gilbert are JBL1.9. *One large bundle*
- GIL4** Letters on the supply of methylated spirits to the Laboratory, 1863. *Three documents*
- GIL5** Correspondence with T Way mentioning J von Liebig's work and sewage experiments, 1864 – 5. *One small bundle*
- GIL6** Letters from the USA, 1868 – 1901, most on matters arising from JH Gilbert's American lectures, others about visits and requests for information. *One large bundle*
- GIL7** Letters and report on agricultural experiments in Aberdeen and Kincardine, 1875. *One bundle*
- GIL8** Letters to JH Gilbert on LAT matters, 1890 – 1901, eg covering letters for cheques, committee minutes, notices of meetings and requests for information. The letters are arranged in yearly bundles and are mostly brief and from H Rix, LAT secretary, with a few from other committee members. *13 small bundles*
- GIL9.1 – 7** Letters, with some draft replies, on personal and administrative matters and on scientific work, 1845 – 1901. Most of the letters are brief and are to JH Gilbert, although a few are to JB Lawes

and to others at Rothamsted. They are in seven bound volumes, arranged alphabetically and indexed by correspondent. There is no subject index and the personal names index is not accurate. Additionally, letters for any correspondent on a particular matter or from a particular time may be found in some or all the volumes and the contents also overlap with the series of 'Rothamsted Experimental Station Papers and Correspondence'. *Seven volumes*

- GIL10** 'J.H. Gilbert foreign letters 1850 – 65': letters on personal, administrative and scientific matters, many in European languages, some translated. *One volume*
- GIL11** 'A Voelcker's collection, letters to J.H. Gilbert': brief letters to JH Gilbert from scientific colleagues given by Lady Gilbert to Mrs Voelcker for her autograph collections and returned in 1924. *One volume, the return of which to Rothamsted is described in RUS2.5, library correspondence*
- GIL12** Copies of letters from JH Gilbert to the LAT, mainly to H Rix, the secretary, 1890 – 1901. *Two folders*
- GIL13** Letters to JH Gilbert, 1839 – 1900, arranged and sent to Rothamsted by Lady Gilbert about 1913, including a testimonial from Thomas Thomson of Glasgow University, 1839 and letter on work in progress, 1840; a testimonial from AT Thomson of London University, 1840; letters from Justus von Liebig, 1841 and 1853, in French and German; from Brewster about obtaining chemicals and subsequent experiments, 1842 and 1843; from Thomas Graham on turnip analysis, 1844 and JH Gilbert's election to the Royal Society, 1859; from Allen Miller on scientific work, 1847 and award of the Royal Society's medal, 1867; from Lyon Playfair, 1860s and 1894 on work in progress; from Charles Darwin and his son Francis on exchange of information with JH Gilbert, with Gilbert's notes and draft replies, 1875 – 82 (10 letters, 5 written by Darwin, 5 by Francis Darwin of which 3 are signed by Darwin); about Gilbert's election as a corresponding member of the Académie des Sciences, 1883; notice of meeting of the Rothamsted Jubilee Fund, 1893; letter from Rona congratulating Gilbert on his prize at the Universal Exhibition, 1900; from Dr. Will in German, undated; Gilbert's draft of a letter to Mittenheimen 1841 and Dymond 1892. *One bundle subdivided into five small bundles.*

The Darwin letters in GIL13 were transcribed in 2008. Also in 2008, Cambridge University Library supplied Rothamsted with photocopies of JH Gilbert's original letters to Darwin and Darwin's draft replies, 1875 – 82. Copies of the Rothamsted Darwin letters were supplied to Cambridge University in 2008 and had been supplied to the Darwin Museum in 1988. Their

reference in 1988 was B6.2. The transcripts, copies and related administrative papers are in a folder in the box with GIL13.

- GIL14.1 – 5** Notes taken at Glasgow University by Gilbert on lectures by J Cowper, Thomas Thomson and WJ Hooker, 1838 – 9. *Five notebooks*
- GIL15** Notes on dyeing made in Manchester and Stockport, c1840, with related letters to Philips of London, 1823. *One bundle*
- GIL16** Letters from Mrs Gilbert (JH Gilbert's mother), 1848, 1859 – 66. *Nine letters loose in a 19th century folder*
- GIL17.1 – 20** Note and memoranda books with rough calculations, notes and tables, 1840 onwards. *20 small notebooks in three bundles*
- GIL18** Memoranda book with calculations, analyses, notes and tables, undated and apparently a rough book but with more detail than the small notebooks above. *One notebook*
- GIL19** Memoranda books on ash analysis, undated. *Two notebooks*
- GIL20** Notebook for tests on lead and limestone, undated. *One notebook*
- GIL21** Notes for analysis of chrome, iron and copper ores found in Scotland, undated. *One roll*
- GIL22** Notes on the effects of insects on lead, c 1850. *One roll*
- GIL23** JH Gilbert's copies of pamphlets in German, mid – late 19th century. *20 booklets*
- GIL24** Letters to JH Gilbert about printing articles, 1853 – 69. *One bundle*
- GIL25** Notes on respiration from various sources, early 19th century onwards. *One bundle*
- GIL26** Copies of notes and specifications relating to artificial incubation of poultry, 1770, mid 19th century. *One bundle*
- GIL27** Drafts for lectures to the British Association at Leeds, Oxford, Manchester, Cambridge and Sheffield, 1858 – 62, 1879. *Six parcels in one bundle*
- GIL28** Notes by JH Gilbert on Scottish farming including visits to named individuals, general observations and some letters, 1858 – 65; notes by Gilbert on the Durris estate, Kincardine, 1885, with a few details of agricultural experiments, 1875, letters to the

- Durris factor and printed regulations and conditions of lease of the Durris estate, 1882. *One folder*
- GIL29** Reports and tables of analysis of superphosphates in England and Germany, including accounts for coprolite raising, 1867. *One bundle*
- GIL30** Notes by JH Gilbert on journeys to study mining, use and transport of phosphorite in Nassau, Germany, 1867, 68. *One bundle*
- GIL31** Notes on a search by JH Gilbert and C Smith, his brother-in-law, for phosphates in Devon and Cornwall, 1867 – 8. *One bundle*
- GIL32** Correspondence and notes, some printed, on establishing RHS scientific committee including the secretary's address at the first meeting, 1868; printed report of a South Australian commission on diseases in cereals, 1868. *One bundle*
- GIL33** Correspondence with MA Lawson of Oxford on his experiments with plants, 1871. *One folder*
- GIL34** Letters from RW Dixon of Essex on crops from a field on his farm, 1874, with tables from 1818. *One folder*
- GIL35** Letters announcing JH Gilbert's election as a corresponding member of the committee for agriculture of the Société pour L'Industrie Nationale and his diploma from the Council of the Academy of Agriculture and Forestry of Petrovskoie, 1875, 1878. *Two items, rolled*
- GIL36** Administrative papers arising from time at Oxford, eg notices of lectures and faculty meetings, letters, invoices for book purchase and binding, 1884, 1887. *One bundle*
- GIL37** Sibthorpe Professorship: papers concerning JH Gilbert's appointment as Sibthorpe Professor of Rural Economy at Oxford with list of lecture titles, lists of lectures on rural economy and notes on work on soils by CGB Daubeny, 1840s and 50s; letters about the proposed publication of Gilbert's lectures; applications for his successor. *One volume*
- GIL38** Sibthorpe Professorship: letters to and from JH Gilbert during his Oxford professorship, 1880s, with a list of correspondents. *One volume*
- GIL39** 'Oxford Letters 1884 – 96', including letters overlapping with the GIL38. *One volume*
- GIL40** Production papers for Oxford lectures, 1884 – 96. *Four boxes*

- GIL41** Translations, abstracts and notes from the works of others used for Oxford lectures, 19th century. *Two boxes*
- GIL42** Production papers for lectures at the Royal Agricultural College, Cirencester, 1885 – 90. *One box*
- GIL43** JH Gilbert's reply to a letter of JB Lawes about papers to be published, 1883. *One bundle*
- GIL44** Correspondence and printed leaflets about agricultural and technical education in Cambridge, Oxford, France and Scotland, 1888 – 9. *One bundle*
- GIL45** Draft letter to CD Daine of Preston on cattle feeding, 1895. *One item*
- GIL46** Printed papers relating to the International Agricultural Congress at Budapest, 1896. *Five booklets*
- GIL47** Notes from press cutting agencies about JH Gilbert's membership of the Pure Beer Committee. *One envelope*
- GIL48** Notes and drafts (very rough) some identified by titles as material for talks and articles, others brief and unidentified, mid – late 19th century. *One folder*
- GIL49** Tables used by JH Gilbert and JJ Willis when speaking to visitors about the Rothamsted fields, late 19th century. *One folder*
- GIL50** JJ Willis' copy of JH Gilbert's explanation of the experiments, with notes for visitors, particulars of visitors and Gilbert's draft of 'A walk over the Rothamsted experiments', late 19th century. *One folder*
- GIL51** Mounted table of wheat prices, 1852 – 92, possibly used in talks or demonstrations. *Two copies in one roll*
- GIL52** Lady Gilbert's list of books, journals and pamphlets in her husband's library, undated. *Three items*
- GIL53** Letter from Lady Gilbert to EJ Russell on her husband's papers, 1915, with Russell's reply. *Three items*
- GIL54** Family history: JH Gilbert census returns, 1851, 1861, 1881, 1891, 1901; miscellaneous genealogical information; pamphlet on the history of the Congregational chapel at Nether, Yorkshire, 1916, where his father was minister. *One folder*

- GIL55** Answers to questions about Rothamsted, prepared by JH Gilbert for the Railway Panoramic Guide, 1870. *One folder*
- GIL56** Production papers for lectures in America, 1893. *Two boxes*
- GIL57** Notes and abstracts of work on agricultural chemistry with printed papers in French and German on agricultural subjects, with translations, notes and analyses of these and other papers, mid – late 19th century. *Two boxes*
- GIL58** JH Gilbert's copy of Phil. Trans. 1845 part 2, with marginal notes. *One pamphlet*
- GIL59** Letters to Gilbert on horse respiration experiments, Gilbert's acknowledgement and photographs of equipment, 1889. *One folder*



ROTHAMSTED
RESEARCH

Library & Archives

JBL

Sir John Bennet Lawes 1814 – 1900, founder of Rothamsted

Extent and form:	Ten volumes (two very large), three boxes and one folder, mainly paper documents in reasonable condition, including sketches and paintings
Administrative history:	Created by Sir John Bennet Lawes in the course of business, family and scientific activities
Custodial history:	Kept at Rothamsted Manor, possibly transferred to Rothamsted Laboratory when the Lawes family left the Manor
Accruals:	Possible, as there is contact with members of the Lawes family, but unlikely
Existence of copies:	Unlikely
Related material at Rothamsted:	GIL, EXP and PROD and authored and co-authored pamphlets in the Library
Related material in other repositories:	Lawes and Wittewronge family and estate papers, 14 th to 20 th century in Hertfordshire Archives and Local Studies/HALS; possibly Fountaine papers (Sir JB Lawes' wife's family) in Norfolk repositories.
	Updated 30 November 2011

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

John Bennet Lawes was a country gentleman who became interested in the relationship between crops and manures when he was in his twenties. This led both to a successful business manufacturing artificial manures and to a long series of experiments on his land at Rothamsted, some of which, 'the Classics' continue in the 21st century. His work is described in two books by GV Dyke 'John Bennet Lawes, the Record of his Genius' 1991 and 'John Lawes of Rothamsted, Pioneer of Science, Farming and Industry' 1993.

Lawes' archive at Rothamsted is small and what is here is what chanced to come to the Laboratory. His personal papers would have been kept at his home, Rothamsted Manor and may have been moved, destroyed or lost when the Lawes family finally left the Manor in the 1930s. The Rothamsted Library Archive includes notebooks from his early experiments and a long series of letters to JH Gilbert, his scientific partner (an inveterate hoarder). There is a detailed catalogue of these letters on the Rothamsted web site. Other items of interest include two volumes of business and personal diaries and accounts, scrapbooks compiled by his wife and sister-in-law, and a few papers relating to his son Charles.

- JBL1** **Papers relating to farm and experimental work**
- JBL1.1** Notes by JB Lawes on farming and experiments, 1840s and on Liebig's work, 1850s. *One notebook*
- JBL1.2** Notes by JB Lawes on 'Agricultural Experiments, 1841, 42 Tried on Rothamsted Farm'. *One notebook*
- JBL1.3** 'Farm Account': notebook listing sales of guano and phosphate and items taken to and from London, 1840s. *One notebook*
- JBL1.4** Notebook used by JB Lawes and JH Gilbert with title 'Laboratory Book Mr. Lawes & Dr. Gilbert Making of Calomel', 1842 – 5. The experiments described in this notebook were done in the early 1840s; they are not the original ones Lawes did before he began his work on plant nutrition. *One notebook*
- JBL1.5** Notebooks with titles 'Sir J.B. Lawes Notebook on the Rotation of Crops, On Artificial Manure, On the Fattening of Animals, Miscellaneous notes and calcns' and 'Sir J.B. Lawes Field Notes Laboratory Notes etc'.. *Two notebooks*
- JBL1.6** 'A list of Mr Lawes' tools', c1850. *One item*
- JBL1.7** Details of Laboratory working hours, 1860. *One item*
- JBL1.8** Newspaper articles by JB Lawes, mid – late 19th century. *One volume*
- JBL1.9** JB Lawes' letters to JH Gilbert, mostly brief, on administrative matters, experiments, meetings, publications and visitors, 1847

– 1900. *13 folders in one box, catalogued in detail, see letters catalogue*

JBL2 Personal papers

JBL2.1 Diary (left hand pages) and accounts (right hand pages) 1847 – 58, with, at intervals, estate rental, stock valuations, financial summaries, capital accounts and lists of contents of cellar. *One very large volume*

JBL2.2 Diary, 1863 – 8, accounts 1863 – 79, valuations of assets and lists of money owed, 1860s, 1870s and loose papers. *One very large volume*

JBL2.3 Notes for a testimonial, c1852. *Three items in folder*

JBL2.4 Notes on his wife, their married life and her alterations to Rothamsted Manor, late 19th century. *One notebook, with transcript*

JBL2.5 Death certificate, 1900. *One item*

JBL2.6 Notes for JB Lawes' obituary, possibly prepared by Robert Warrington, junior, 1900. *One folder*
Note: D/ELw F94 – 99 at Hertfordshire Archives and Local Studies (HALS) are other items relating to JB Lawes' life

JBL2.7 Commemorative scrolls, addresses and diplomas awarded to JB Lawes and JH Gilbert including notice from the Minister of State Properties in St Petersburg of Lawes' election as a corresponding member of the Academic Committee of the Ministry of State Properties, 1863 (with translation); letter to Gilbert on his election as a corresponding member of the *Institut Agronomique de Gorigoretsk*, Russia, 1863; notice of Gilbert's election as an honorary member of *L'Académie agricole et forestière de Petrovskoie*, 1878; commemorative scrolls received from the Royal Society, the Royal Agricultural Society of England, the Linnean Society, the Chemical Society of London, the Royal Agricultural College Cirencester, the Association of American Agricultural Colleges and Experimental Stations, the Union of Agricultural Research Stations in the German Empire and the *Société de Agriculteurs de France* to mark 50 years of research at Rothamsted, 1893. *13 items in cardboard folder, one in leather folder, one framed*

JBL2.8 *number not used*

JBL2.9 Allotment Club Rules and regulations, 1899; notes, including notes on the Club's history, 1891 – 1900. *One folder, see also pamphlets volume 117 for Allotment Club rules 1875 and a related letter from JB Lawes*

- JBL2.10** 'Japanese Sketch Book from Yokohama, 1867 from G King V. Admiral'. *One sketch book, found in the Adams Case, 2008*
- JBL3.1** **Notes by others on JB Lawes**
JBL3.1 CB Williams' notes on JB Lawes and Rothamsted, mid 20th century. *One folder*
- JBL3.2** Miscellaneous notes by Lady Bawden and others on Lawes, including his sugar interests in Australia, late 20th century. *One folder*
- JBL4** **Caroline Lawes and the Fontaine family**
JBL4.1 Scrapbooks of photographs, watercolour sketches, certificates and newspaper cuttings, and photograph albums compiled by JB Lawes' wife Caroline, nee Fontaine, before and after her marriage, mid – late 19th century. *Four volumes*
Note: D/Z55 F 30 – 32 at Hertfordshire Archives and Local Studies (HALS) include other sketches by Caroline Lawes and Elizabeth Fontaine. D/ELw F100 – 102, also at HALS, are other related items.
- JBL4.2** Scrapbooks compiled by Caroline Lawes' sister Elizabeth Fontaine, early – mid 19th century. *Three volumes*
Note: D/Z55 F 30 – 32 at Hertfordshire Archives and Local Studies (HALS) include other sketches by Caroline Lawes and Elizabeth Fontaine
- JBL4.3** Photograph of painting of Hatching Green by Caroline Lawes, late 19th century. *One item in folder*
- JBL5** **Charles Lawes-Wittewronge and Caroline Creyke (Lawes' son and daughter)**
JBL5.1 Receipts for work on Manor and elsewhere. *Six boxes; further details held in the Rothamsted Archive of Scientific and Farm Equipment*
- JBL5.2** Charles Lawes-Wittewronge obituary, 1911, coat of arms, miscellaneous notes, including notes on WL Murray, model for the death of Dirce, mostly photocopies. *One folder*
- JBL5.3** Diploma awarded to Charles Lawes-Wittewronge at the Franco British Exhibition, 1908. *One item, stored in folder with JBL2.7*
- JBL5.4** Coloured sketches of houses in Harpenden by C[aroline] C[reyke], Lawes' daughter, two identified as Harpenden, 1883. *Four drawings in folder*
- JBL6** **Family members**

- JBL6.1** Lawes Family Bible, late 18th – early 20th centuries. *One large volume*
- JBL6.2** Will of Marianne Warde, née Lawes, 1888. *One photocopy*
- JBL6.3** Lady Amy Lawes-Wittewronge's notes on the Manor contents, 1904, with transcript, 2007; accounts with Jn Parcell, baker, 1911 – 13. *One volume, one file, one notebook*
- JBL6.4** Correspondence with Lawes descendants and copies of family trees*, mid/late 20th and early 21st century, including letters on rooms in the Manor, with a plan and transcripts of some letters. *One folder*
**(Note: due to Data Protection requirements family tree information on those likely to still be living will be withheld)*
- JBL7** **Miscellanea**
- JBL7.1** Census returns: Lawes family, 1851 – 91, Rothamsted Manor 1841, with duplicates. *One folder*
- JBL7.2** Homes and Gardens, January 1992, with article on Ardchattan Priory. *One magazine*



ROTHAMSTED
RESEARCH

Library & Archives

LAT 1 – 9

Lawes Agricultural Trust Foundation and administration, 1889 – mid 20th century

Extent and form:	17 boxes, one roll and three volumes stored separately. Many papers worn by handling.
Location:	Annexe
Administrative history:	Created by the LAT
Custodial history:	In the Annexe strongroom by 1984 or held by LAT secretaries and transferred in the mid 1990s
Accruals:	Possible as the LAT still exists
Existence of copies:	Other copies of the deed of foundation are known; copies of reports and other printed items are likely.
Related material at Rothamsted:	Other papers are still held by the LAT; extent and content unknown
Related material in other repositories:	None known
	Updated 6 June 2011

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

Sir John Bennet Lawes founded the Lawes Agricultural Trust in 1889 to make provision for his experiments to continue after his death. It was altered in 1989 and continues to advance the science of agriculture, see www.rothamsted.ac.uk

The archives below cover the Trust's foundation, related title deeds (including deeds of properties outside Rothamsted) and estate management up to the late 20th century. They also include JH Gilbert's reports and correspondence as he remained actively involved until his death in 1901. These are followed by archives from the years immediately after Lawes and Gilbert's deaths when JA Voelcker and AD Hall began to restructure the long term work. There is also a long series of correspondence between Trust members and members of Rothamsted staff.

LAT1 Foundation, title deeds and estate maintenance, 1889 – late 20th century

LAT1.1 Foundation deed, (printed) 1889 and related papers, some referring to the 'Rothamsted Scientific Trust', 1870s to 1890s; summary for the Royal Society and agenda for the first Council meeting, 1889; letters from JB Lawes to J Evans on administrative matters, 1889 – 90 and on the future of the experiments, undated, probably late 1890s.
One folder

LAT1.2 Agreements between JB Lawes and the LAT, 1889 – 91 and between C Lawes Wittewronge and the LAT, 1903 – 6, including epitome of Trust deed, Counsel's Opinion on foundation deed, agreement on footpath between Broadbalk and Park Grass, Land Registry letter on land and other charges, title redemption certificate and valuations. Also copies, 1905, of JB Lawes' marriage and death certificates, 1842 and 1900, Mrs Lawes' death certificate, 1895, C Lawes Wittewronge's birth certificate, 1842 and death certificate of AJ Russell of Edinburgh, 1887 possibly a party to a mortgage of some of JB Lawes' property in the early 1840s. All in an envelope labelled 'Papers taken over in 1927 from Few and Co' and also including papers received from Few and Co in 1944. *One bundle*

LAT1.3 Deeds, 1707 – 1812, of Coach Lane Field (formerly Ninnings) purchased by William Bailey from Mrs Susanna Race 1812, with abstract of title 1707 – 1811. The earlier deeds include other property in Harpenden. Also tenancy agreement between H Lawes Wittewronge and the LAT for Coach Lane Lodge, 1923, and two agreements between H Lawes Wittewronge and Wilson and Bailey for rights to a gateway onto a path on the Rothamsted estate, 1923. *One bundle*

- LAT1.4** Deeds, 1904 – 5, of the 'residence of the late Sir Henry Gilbert at West Common, Harpenden' including an extract from LAT minutes on C Lawes Wittewronge's offer to sell, conveyance with plan 1905, and transfer of the same property, 1994, with plan of proposed site layout. *One envelope*
- LAT1.5** Conveyance with plan from C Lawes Wittewronge to the LAT of ground and two cottages, 1909. *One envelope labelled 'rear of laboratory fronting farm road'*
- LAT1.6** Consolidating agreements, with supporting papers, between A Lawes Wittewronge and the LAT, over rights of way and related matters, 1913. *One folder*
- LAT1.7** Lease with plan by H Lawes Wittewronge to the LAT of land near Amenbury Lane, 1932. *One envelope with note 'later purchased', in folder with LAT1.6*
- LAT1.8** Lease of Home Farm, Rothamsted by A Lawes Wittewronge to the LAT 1912, lease by the Public Trustee to Major RB Sidebottom 1930, statutory declaration as to title of H Lawes Wittewronge 1934, copy conveyances, with plan, 1934 and 1936, of Rothamsted Manor, farm and land by H Lawes Wittewronge to the LAT, lease by the LAT to Mrs Sidebottom 1936 and related deed of surrender of Redbourn Lodge 1938. *One envelope*
- LAT1.9** Agreement for compounding liability for repair and maintenance of the north transept of Harpenden Church, 1938, with copy of faculty for rebuilding the church, 1861; extract from faculty, 1911, survey, c1936, copy of agreement and a little related correspondence. *One bundle*
- LAT1.10** Abstract of title from 1843, conveyance 1908, deed of appointment, case to counsel, order for sale, search certificates and statutory declaration relating to West Common Mission Hall, sold to the LAT in 1937. *One envelope; a conveyance to the LAT in 1937 was not with these documents when they were transferred and possibly was given to the new owner when the property was sold*
- LAT1.11** Tithe redemption plan and a little correspondence, 1934, 1940. *One folder, with roll stored nearby*
- LAT1.12** Title deeds of land at Half Acre, Barrow, Suffolk (subsequently part of Brooms Barn Experimental Station), 1751 –1967, conveyed to LAT 1967. *One folder with*

partial list of contents

- LAT1.13** Correspondence, mainly with the Public Trustee, with solicitors, Rumball and Edwards, and with surveyors, Rees Reynolds and Hunt, on Mrs Sidebottom's lease after the LAT purchase of the Manor in 1934; on repairs 1935 – 9, referring to panelling, leather and tapestries as well as general maintenance; and on attempts to let the Manor in 1939 after her death. Also, list of 'chattels' purchased by the LAT (garden ornaments, pictures and statues) and inconclusive letters on ownership of books and documents. *One box containing a large number of letters arranged roughly in chronological order*
- LAT1.14** Correspondence with military authorities, solicitors and surveyors on wartime requisitioning, de-requisitioning and maintenance of the Manor, grounds, cottages, demonstration room and other buildings at the farm, plus details of compensation and a schedule of garden fittings, c1939 – 47. *Four folders and two bundles*
- LAT1.15** Correspondence on the farm, alterations to farm buildings, water supply and cattle shed, electrification and electrical installation, silo and Adco shed, purchase, damage by birds and game, proposed stock arrangements, suggestions for improving demonstrations, proposed Woburn reorganisation, extensions (implement shed, lavatory block, covered yard, rat proof barn) 1920s – 40. *Two boxes*
- LAT1.16** Letters and forms relating to war damage insurance and compensation for the farm, laboratory buildings and Manor windows, early 1940s. *Two folders*
- LAT1.17** Correspondence with the ministry and with architects, Freeman and Hodgson, accounts, contract, schedule of condition and plans for the Plant Pathology Laboratory and the Insectary, plus some references to the Director's house, 1920s. *Three folders*
- LAT1.18** Correspondence, specifications and related papers on farm cottages, 1928 – 9 with a report on the condition of estate properties, excluding the laboratory buildings, 1937. *One folder*
- LAT1.19** Correspondence mainly with M Tapper, architect, on extensions, plus a few notes on ministry grants, fittings and electrical installations, 1936 – 9; correspondence; correspondence, notes and plans for a new road behind

the laboratories, 1941 – 5; notes and plans on proposed extensions and refurbishment (apparently throughout the site, excluding the Manor) including new wing extensions, glass/green houses, Professor Blackman's laboratory and NW Pirie's laboratory, 1930s, 1940s. *Two boxes*

- LAT1.20** Correspondence on the lease of fields near New Zealand and Great Harpenden Fields, on the sale of part of Hill Harpenden Field to Harpenden UDC and on the surrender by Mrs Sidebottom of Redbourn Lodge, 1930s. *One folder*
- LAT1.21** Correspondence on the purchase of Rivers Lodge from the Wilson family, subsequent tenants, wartime use, derequisitioning and alterations, 1926 – 51. *Six folders*
- LAT1.22** Correspondence on the purchase of and alterations to Rothamsted Lodge, 1946 – 9. *One folder*
- LAT1.23** Correspondence on exemptions from rates 1939, certificate 1945, copies of the Scientific Societies Act 1843. *One folder*
- LAT1.24** Correspondence on planning schemes, 1930s. *Two folders*
- LAT1.25** Abstract of appointment of trustees, 1944 – 69; deed of appointment of new trustees, 1981, photograph of Lord Radnor's last meeting, 1964; photographs and report of last meeting, 1989. *One folder*
- LAT2** **Reports and papers up to the death of Sir Henry Gilbert, 1901**
- LAT2.1** JH Gilbert's reports to the LAT Committee, with supporting papers, 1889 – 1901. *One box*
- LAT2.2** LAT Committee attendance books, 1887 – 1973, also including attendance at meetings of the Society for Extending the Rothamsted Experiments, 1910 – 87. *Four small volumes*
- LAT2.3** JH Gilbert's correspondence, 1890 – 1901, on LAT matters with H Rix (secretary), JB Lawes and C Lawes Wittewronge, including letters about R Warrington junior and H Richter, proposals for continuing experiments and draft summary of the LAT's first five years. *One folder*
- LAT2.4** Invoices and balance sheets, 1883 – 1901. *One folder*
- LAT2.5** Correspondence on the loans to the Natural History

Museum 1899; H Armstrong's report on lectures in the United States 1890; secretary's notes, late 19th century.
One bundle

- LAT2.6** Valuations, notes, letters and reports on insurance of the laboratories and their contents, 1900 – 1. *One folder*
- LAT2.7** Obituary notices, apologies for absence and signatures of those attending JB Lawes and JH Gilbert's funerals, 1900 and 1901; photographs of their graves, 1948 and 1993.
One bundle
- LAT2.8** Correspondence and papers on JH Gilbert's appeal against rates, 1896 – 7. *One bundle*
- LAT2.9** 'Manuscript Reports': bound volumes of JH Gilbert's reports, 1891 – 7, containing duplicate and final copies of some items in LAT2.1. *One volume, numbered 1 and ending a few years before Sir Henry's death so there may have been a second volume, since lost.*
- LAT3** **JA Voelcker and AD Hall, 1901 – 6**
- LAT3.1** Scheme of work for Rothamsted Experimental Station; details of staff, holiday arrangements, unpublished notes and office clearing, prepared under the supervision of JA Voelcker after the deaths of JB Lawes and JH Gilbert, 1901 – 3. *One folder*
- LAT3.2** Letters to JA Voelcker and notes and figures on work in progress, 1902. *One bundle*
- LAT3.3** Letters to JJ Willis, station secretary, mainly from JA Voelcker, 1893 – 1902. *One bundle*
- LAT3.4** LAT scrapbook, mainly newspaper cuttings, 1890 – 1902.
One volume
- LAT3.5** AD Hall's reports to the LAT, 1902 – 6. *One bundle*
- LAT3.6** AD Hall's correspondence with H Rix, LAT secretary and H Muller, 1902 – 6. *One bundle*
- LAT3.7** AD Hall's general and financial notes and memos, 1901 – 6, including inventories of laboratory apparatus, 1903 and 1906. *One bundle*
- LAT3.8** Appeals to the Board of Agriculture and others for funds to continue work at Rothamsted, 1902 – 10. *One bundle*

- LAT3.9** Lists of platinum and other vessels borrowed from the Laboratory safe, 1910 – 66. *Two volumes*
- LAT3.10** Letters, reports on organization and on current and future plans and financial papers sent to H Muller from AD Hall and H Armstrong, 1910 – 14 and returned by Mrs Muller to EJ Russell in 1916. *One envelope*
- LAT3.11** LATC correspondence, 1907 – 11. *One volume*
- LAT4** **Correspondence**
- LAT4.1** Letters, largely routine, to H Rix from LAT members, accountants and solicitors, including letters from JH Gilbert and AD Hall on general matters, from H Armstrong and B Dyer on their lectures in the United States and from H Muller on financial matters, 1889 – 1910. *Two boxes*
- LAT4.2** Carbon copies of H Rix's out-letters, some of which are replies to letters in LAT6.1. *One volume*
- LAT4.3** Carbon copies of letters from Dunkley, Hall, Voelcker and Willis, possibly to H Rix, on administrative matters. *One volume*
- LAT4.4** Correspondence, largely routine, of EJ Russell, Station Director and W Barnicot, Station Secretary, with LATC chairmen Lord Bledisloe, 1920s and Lord Clinton, 1920s to 1940s. *Two folders tied as one*
- LAT4.5** Correspondence of EJ Russell, Station Director and W Barnicot, Station Secretary with LATC treasurers HE Armstrong 1917 – 40, VH Blackman 1930s – 40, HT Brown 1920, JB Farmer 1930s – 40s, H Muller 1914 and D Prain 1915 – 30s, referring principally but not exclusively to financial matters. *Six folders, tied as one bundle*
- LAT4.6** Correspondence, largely routine, of EJ Russell, Station Director and W Barnicot, Station Secretary, with LATC committee members WCD Dampier 1931, JL Luddington 1920s, SU Pickering 1915 – 20s, AB Rendle 1914 – 30s, JB Thorold 1914 – 20s, JA Voelcker 1914 – 20s and TB Wood 1920s. *Seven folders, tied as one bundle*

The numbers LAT5 – LAT9 have not yet been used. LAT 4 is followed on the shelves by LAT 10. Numbers 11 to 19 have also not been used so LAT 10 is followed on the shelves by LAT 21



ROTHAMSTED
RESEARCH

Library & Archives

LAT 10 – 19

Lawes Agricultural Trust Minutes, 1931 – 40

Extent and form:	One box of papers in reasonable condition
Location:	Annexe
Administrative history:	Created by the LAT in the course of routine activities
Custodial history:	In the Annexe strongroom by 1984
Accruals:	Possible, from the LAT
Existence of copies:	Possibly with other Trust members
Related material at Rothamsted:	The LAT has current and semi-current papers
Related material in other repositories:	Unlikely
	Updated 7 June 2011

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

There are no formal arrangements at Rothamsted for regular transfer of LAT minutes to the Library Archive but some have been sent to the Library Archives.

LAT10 Minutes

Minutes and circulated papers ie typed copies of signed LATC minutes retained in minute books, plus reports and related papers considered at meetings, 1931 – 40. *One box*

LAT 10 follows LAT4 on the shelves. Numbers LAT5 – LAT9 and LAT11 – 19 have not yet been used so LAT 10 is followed on the shelves by LAT 20



ROTHAMSTED
RESEARCH

Library & Archives

LAT 20 – 29

Lawes Agricultural Trust Financial papers, 1900 onwards

Extent and form:	Eight boxes of papers in good condition
Location:	Annexe
Administrative history:	Created by the LAT in course of routine activities
Custodial history:	Held by LAT secretary and transferred in 2005
Accruals:	Possible, from the LAT
Existence of copies:	Possibly, with other Trust members
Related material at Rothamsted:	The LAT has current and semi-current papers
Related material in other repositories:	Unlikely
	Updated 7 June 2011

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

There are no formal arrangements at Rothamsted for regular transfer of LAT financial papers to the Library Archive but some have been sent to the Library Archives.

LAT20 LAT trustees and LAT committee accounts, some signed, 1900 – 90, with gaps, **access restricted**. *Six boxes*

First box: Laboratory accounts 1901, 1902, 1905; schedule of investments and income 1905.

Letters summarising current financial position plus accounts for the Institute of Plant Nutrition and Soil problems and the Institute of Plant Pathology, 1922.

Trustees' schedules of investments and receipts and payments accounts, 1906, 1908, 1911, 1914 – 21, 1923 – 54, 1956 – 8, 1960, 1962 – 72, with balance sheet from 1953 onwards.

Trustees' investment accounts: balance sheets and accounts, 1975 – 8, 1980, 1986 – 90.

Second and third boxes: LAT Committee balance sheets and accounts, 1906 – 54, 1970, 1972 – 75, 1977 – 81 plus report 1976.

Fourth box: LAT Committee schedules to balance sheets and accounts, 1949, 1951 – 4, 1964 – 75.

LAT Committee statements of accounts, 1982 – 90

Fifth box: LAT Committee Rothamsted and Woburn farms balance sheets and accounts, 1914 – 16, 1918 – 48

Sixth box: LAT Committee statements of net assets and accounts, Rothamsted and Woburn Farms only 1949 – 54; estate general 1955 – 63, including also some balance sheets etc missing from main series

Brooms Barn accounts 1967, 1970, 1971, 1973 – 5, 1977, 1983; other Brooms Barn accounts may be with the estate general accounts.

LAT21 LAT, RES and related companies: reports and financial statements, 1991 – 2003. *Two boxes, including financial records 1998 – 2003, probably added to the box by Peter Thomas. They are a mixture of photocopies, print-outs, drafts, spares and signed copies. There is a detailed list in the Library, reference LAT21 list, but **access to these papers is restricted***

LAT22 – LAT29 unused



ROTHAMSTED
RESEARCH

Library & Archives

LAT 30 – 49

Lawes Agricultural Trust Miscellaneous financial records

Extent and form:	About 180 volumes and ledgers and one box. Moderate condition, some wear and tear through use, not individually numbered.
Location:	Store
Administrative history:	Created by the LAT in the course of routine activities
Custodial history:	In Rothamsted finance office until transferred to Library archives in 2004 – 5 and 2010
Accruals:	Possible; extent of archives in finance office unknown
Existence of copies:	Unlikely
Related material at Rothamsted:	Recent financial records are held in the finance office
Related material in other repositories:	Unlikely
	Updated 6 June 2011

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

The archives below date from the establishment of the Lawes Agricultural Trust in 1889 to the 1970s. They cover the range of its financial responsibilities, including general management, laboratory, estate and staff expenses. For up to date information on the LAT see www.rothamsted.ac.uk

- LAT30** Lawes Agricultural Trust Committee cash books, 1889 – 1951. *Five volumes*
- LAT31** Lawes Agricultural Trust Committee ledgers, 1891 – 1946. *Seven volumes*
- LAT32** Cash analysis books, 1903 – 1951. *16 volumes*
- LAT33** Grants-in-aid from the Development Commission, 1911 – 3. *One volume*
- LAT34** Laboratory accounts, 1913 – 47, continuing as private cash books, 1947, 1951 – 65, 1970 – 3, 1977 – 8. *17 volumes*
- LAT35** Petty Cash books, 1917 – 8, 1929 – 51. *16 volumes*
- LAT36** Various income and expenditure accounts and ledgers, some overlapping, others labelled 'departmental accounts' and divided by department, 1917 – 1970s. *Eleven volumes, some of which relate to each other and some are miscellaneous.*
- LAT37** Lawes Trust Sub-Committee bank account 2: including accounts 1913 – 6; expenditure analysis, 1917 – 8 and Woburn Fruit Farm accounts, 1920. *One volume*
- LAT38** Special Experiments' accounts, 1925 – 47. *Seven volumes*
- LAT39** Sundry sales and refunds, 1925 – 9, continuing as refunds, 1929 – 49. *Eight volumes*
- LAT40** Trustees' cash book and ledger, 1940s, 1950s. *Two volumes*
- LAT41** Departmental inventories and equipment purchase records, late 1940s – 80s. *Nine green binders, one white volume*
- LAT42** General ledgers, 1952 – 82. *33 binders*
- LAT43** Main ledger and journal, 1978 – 81. *Two blue binders*
- LAT44** Estate accounts and rentals, 1926 – late 1940s; rental, mid 1940s – early 1950s with a few details of property purchase and ownership; property rents and repairs record (all properties including laboratory buildings), 1940s – 60s. *Four volumes, two green binders, one folder*

LAT45.1 Salary books, 1920 – 47. *Six volumes*

LAT45.2 Wages books, 1912 – 49. *35 volumes*

LAT46 – LAT49 unused



ROTHAMSTED
RESEARCH

Library & Archives

LCMC

Lawes Chemical Manure Company, mid 19th – mid 20th century

Extent and form:	One box, six volumes and one roll, mainly paper documents in reasonable condition
Location:	Annexe
Administrative history:	Largely created at Lawes Manure Works and the Lawes Chemical Manure Company and in the course of Lawes' defence of his patent.
Custodial history:	Most items probably kept at Rothamsted Manor until the Lawes family left; a few given to the archives in the 1980s
Accruals:	Unlikely
Existence of copies:	None known
Related material at Rothamsted:	JBL2.1 and JBL2.3 (Lawes diaries)
Related material in other repositories:	Some company business records are at Valence House Museum, London Borough of Barking and Dagenham; there may be details of Lawes' patent at the National Archives.
	Updated 4 July 2011

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

Following the success of his early experiments, Lawes established the Lawes Manure Company/LMC to manufacture superphosphate fertiliser. The factories were in east London and retailing superphosphate and other fertilisers became an important part of the business. In 1872, Lawes sold the business, which became known as the Lawes Chemical Manure Company, and then briefly acted as an advisor.

The archives here do not include Company records. The most important part of this collection is the material relating to Lawes' defence of his patent for manufacturing superphosphate, which shows in detail the complexities of his patent suits.

Lawes also had a factory at Millwall, which manufactured citric and tartaric acid. He retained this when he sold the fertiliser business but there are no clearly identified records of this factory at Rothamsted.

- LCMC1** Lawes Manure Works at Barking and Deptford: tables of materials unloaded and used, payments, expenses and a rough plan, with a few letters to JB Lawes from the manager, Wilson, and Lawes' report on a visit to sulphuric acid works on Anglesey, 1840s, 1850s. *One large roll*
- LCMC2** Lawes (Chemical) Manure Company notices of sale, 1872; invoices for purchases of fertilizers (mainly) and animal feed from John Bennet Lawes (the Manure Company) and Chas. Tennant Sons & Co., 1872 – 8; a few letters to JH Gilbert from Thos. Bennett on composition of manures, 1873 – 80; diagrams of chamber overhang, 1924, 1925; schedule of deeds of properties in Dublin, 1820 – 89, prepared 1930. *One bundle*
- LCMC3** Lawes (Chemical) Manure Company: advertising brochures, 1871 – 3; employment agreements for Thomas Elborough, managing director, 1903, 1907; bulletins, 1931 – 4, illustrated cover, 1920s or 1930s. *One bundle*
- LCMC4** Photographs of manure works, some identified as Barking, 1920s, some taken by Aerofilms. *One folder*
- LCMC5** Colour slides and print of ashtray showing the Lawes Chemical Co. Ltd. (*sic*) Deptford Wharf in the 1880s; slide of an illustration of the Lawes Works, Deptford, given to the archives by GV Dyke, who received them from the owner of the ashtray. *Four items*
- LCMC6** Photocopies and letters about Lawes' patent, mid 19th – mid 20th century. *One folder*
- LCMC7** Lawes' Super-Phosphate Patent suit: printed pamphlets on mineral manures, 1830s – 50s, annotated copy of patent and

specification, correspondence, witnesses' reports, notes and case, 1852. *Six volumes*

- LCMC8** Letters from the Lawes Manure Company office to an agent in Kent, late 1840s, with related papers. *One folder of photocopies. These items may be consulted but not copied as Rothamsted does not own the original letters; see archivist's 'archives elsewhere' file*
- LCMC9** One cwt 20th century polysac, used by Manure Company, with picture of JB Lawes. *One sack*
- LCMC10** Newspaper cuttings, 1961. *One folder*
- LCMC11** Folder titled 'Technical' and 'Lawes' mainly containing advertising brochures, 1920s, 1930s, The brochures do not specifically relate to chemical manure manufacture and may have been collected by a Company employee and later given to Rothamsted Library. *One folder*



ROTHAMSTED
RESEARCH

Library & Archives

LIB

Library, 1940s – 90s

Extent and form:	Two boxes, contents mainly in reasonable condition
Administrative history:	With the exception of LIB2 (Library Committee minutes) these files were found in the Library attic and the Librarian's room in the early 21 st century.
Custodial history:	Mainly created by and kept in the Library
Accruals:	Unlikely
Existence of copies:	None known
Related material at Rothamsted:	Russell's correspondence (largely unsorted) includes letters on Library acquisitions.
Related material in other repositories:	None known
	Updated: 1 October 2012

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

The Rothamsted Library is known as the Gilbert Library as it has developed from Lady Gilbert's gift of Sir Henry Gilbert's library to Rothamsted in 1913.

The archives described below are mid – late 20th century Library Committee minutes plus other papers probably first kept by the librarians D Boalch and T Cawley for evidential reasons.

Stock books c1913 to 1975 are held in the Library.

- LIB1** **Rare books, prints and manuscripts**
- LIB1.1** Notes on library and archives by Librarian (D Boalch) 1950s.
One folder
- LIB1.2** Lists of cattle prints and correspondence etc on background, cataloguing and sale of duplicates, 1940s, 1950s. *One bundle*
- LIB1.3** Correspondence on transfer of manuscripts relating to agriculture to Reading University, 1960s, 1970s.
One folder; these documents were collected by EJ Russell in pursuit of his aim of making Rothamsted library a centre of research into agricultural history. They were sent to Reading on permanent loan in 1966 – 7. See archivist's 'archives transferred' file for related 21st century correspondence.
- LIB1.4** Valuations (books, manuscripts and prints) late 1970s, 1981.
One folder
- LIB1.5** Sale catalogues and list of items sold and related papers, late 1970s, 1980s. *One bundle*
- LIB2** **Minutes**
- LIB2.1** Library committee minutes and a few circulated papers, 1943 – 96 (the complete life of the Committee). *One box*
- LIB3** **Miscellaneous**
- LIB3.1** Lawes Coat of Arms: correspondence on restoration, 1950s.
One folder
- LIB3.2** Miscellaneous correspondence: a mummified cat, 1964; missing print number 71, 1973. *One folder*
- LIB3.3** Library rules 1958, draft guide 1980s and photographs 1980s.
One folder
- LIB4** **Library refurbishment**
- LIB4.1** Correspondence, minutes and plans for new library buildings 1964-1995. *Three folders*



ROTHAMSTED
RESEARCH

Library & Archives

LTL

Lawes Testimonial Laboratory, mid 19th century

Extent and form:	One box, mainly paper documents in reasonable condition, two folders and one loose bundle, damaged
Administrative history:	Mostly items found in the annexe strongroom and rare books room, 1984 onwards; a few copied from Harpenden Local History Society archive collections, c1987
Custodial history:	In annexe strongroom and rare books room before 1984
Accruals:	Unlikely
Existence of copies:	Copies of newspapers probably available elsewhere; original plans remain with Harpenden Local History Society
Related material at Rothamsted:	None known
Related material in other repositories:	None known
	Updated 1 December 2011

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

Lawes' work was becoming widely known by the 1850s and one result of this was that farmers and others collected funds for a testimonial to him. This money was used to build a laboratory to replace the barn in which the first experiments had been carried out. The Lawes Testimonial Laboratory opened in 1855; it was extended by adding the Sample House in 1889 and it remained in use until the northern end of the Russell Building opened in 1913. It was then demolished although the Sample Houses still stands in 2011. The barn in which the first experiments had taken place was also demolished.

The Laboratory was designed by Charles Gilbert, Henry's brother. He was a poor choice and much of this small archive relates to construction problems.

- LTL1** Letters and papers, mainly from C Gilbert, architect, with lists of extras added to original contract, lists of subscribers and committee members, a poetry tribute to JB Lawes and particulars of Rothamsted farm, 1850 – 5. *One volume*
- LTL2** Flimsy copies of letters from JH Gilbert to C Gilbert and other family members on the laboratory and financial matters, 1854 – 5. *One folder*
- LTL3** Newspapers with reports of the opening of the LTL, 1855. *One bundle*
- LTL4** Plans for laboratory internal fittings, 1856. *One bundle*
- LTL5** Bible, King James' version, printed 1760, with note by Edwin Grey suggesting it may have been used for services in the Laboratory while Harpenden parish church was being rebuilt, 1861 – 2. *One volume*
- LTL6** Photocopies of documents relating to the Laboratory in the Hodgson Collection held by the Harpenden Local History Society, photocopies made in the 1980s from mid 19th century originals. *One folder*
- LTL7** Lithographs by F Dangerfield of the Laboratory exterior and interior, with ground plan, undated, probably 1862 – 3. *Two folders, duplicates*



ROTHAMSTED
RESEARCH

Library & Archives

MAN

Manor, mainly 20th century

Extent and form:	Five boxes, one roll and one large bundle, in reasonable condition
Location:	Store
Administrative history:	With other archives in the annexe strongroom in 1984 or given to the archives by staff members after 1984
Custodial history:	Kept at the Manor or elsewhere at Rothamsted before transfer to the archives
Accruals:	No additional archives known of at Rothamsted but individuals might donate personal notes or photographs
Existence of copies:	There will be copies elsewhere of printed items.
Related material at Rothamsted:	See JBL, LAT, PHO and RB
Related material in other repositories:	D/ELw , the Lawes Wittewronge archive at HALS (Hertfordshire Archives & Local Studies)
	Updated 4 July 2011

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

Rothamsted Manor is a grade 1 listed building and is described in detail in *The Manor of Rothamsted* by DH Boalch, 1953, revised 1978. It was occupied from the early 17th century until the 20th by the Wittewronge family and their descendents, the Lawes family; the Lawes Agricultural Trust bought it from the Lawes family in 1934.

The surviving archives of the manor, estate and families were given to Hertfordshire Archives and Local Studies/HALS in 1967 and 1977. Some of the papers described below are photocopies, printed and pictorial items relating to the Manor before it belonged to the Trust. The remainder refer to alterations and refurbishments from the mid 20th century onwards and to sales, enquiries and administrative matters.

MAN1 Families

MAN1.1 Wittewronge family

MAN1.1 Sir John Wittewronge's weather diary, 1684 – 9 (photocopy, copyright HALS, original HALS D/ELw F19; published by the Hertfordshire Record Society in 1999 as 'Observations of weather: the weather diary of Sir John Wittewronge of Rothamsted 1684-1689' edited by Margaret Harcourt Williams and John Stevenson)

MAN1.2 Lawes family

MAN1.2 *See JBL and PHO for Lawes family notes and photographs*

MAN2 Publications and printed items

MAN2.1 *Country Life*, 1906: three copies of articles on the Manor, one bound, with an album of 31 photographs used as illustrations and further copies of eight of the photographs. *One bundle, stored separately*

MAN2.2 Notes and correspondence on preparing the Manor Guide, with letters on the site of the Barn Laboratory and on the age of the Lime Walk and photographs used for frontispiece and plates i, iv, v, vi, viii, xi-xiv; (plates ii, iii and vii are from *Country Life*, plates xvii, xix and xx are RCHM, plate xvi is Lawes' portrait, plates xv and xvii not sure). *One folder*

MAN2.3 Royal Commission on Historical Monuments/National Monuments Record. *44 undated photographs in one folder, copyright RCHM*

MAN2.4 Offprints, pamphlets, newspaper cuttings, typescript notes, letters etc on the history and contents of the Manor, the estate, early owners, the Wittewronge and Lawes families, the work of Sir John Lawes and Rothamsted history, 20th century. *One bundle*

- MAN3** **Building exterior**
- MAN3.1** Lithograph of Manor by E Noyes, made between 1843 and 1864. *Three copies*
- MAN3.2** Black and white and colour photographs of water colour painting by Thos Fisher c1804 with note 'original in Herts County Muniment Room'. *Two photographs and explanatory note, 2008*
- MAN3.3** Original, photographs and print of colour picture by A Phipson, 1902. *Five items*
- MAN3.4** Colour photograph on glass, 1912. *One glass plate in small wooden container*
- MAN3.5** Black and white photographs and one colour photograph of the exterior, sculptures and gardens taken 1940s – 80s. *35 photographs in one folder*
- MAN3.6** Colour and black and white postcards. *Five cards in one folder, including duplicate*
- MAN3.7** Colour photograph of picture, probably a water colour, signed WW 1989. *One photograph in folder*
- MAN3.8** Black and white aerial photographs by R Bradley, 1948 or 9. *Two photographs in folder*
- MAN3.9** Greetings card of picture of the Manor by Jean O'Grady, early 21st century, extract from the Art Journal, 1894 and correspondence, 2003. *One folder*
- MAN3.10** Notes on pictures in HALS and the British Library, 2008 (two only). *One small folder*
- MAN 3.11** Front, showing croquet hoops on lawn, 20th century. *One photograph in folder*
- MAN4** **Building interior**
- MAN4.1** Photographs and photocopies of plans of ground and first floor, c1989 and undated. *One folder*
- MAN4.2** Harpsichord, Spanish leather, staircase and stained glass: letters, newspaper cuttings, offprints and photographs, 20th century, plus example of leather. *One folder*
- MAN4.3** Wall paintings: correspondence on identification, with

- photographs, 1930s – 51. *One bundle*
- MAN4.4** Colour slides, 1970s, of interior and wall paintings. *8 slides in plastic box*
- MAN5** **Building restoration, refurbishing and conservation**
- MAN5.1** Plans for alterations, 1946 – 8; photographs of reopening event and of parts of the interior eg refurbished rooms, other rooms, wall painting and ceilings, 1952; letters about loan of chairs by Lord Radnor, 1952, 1971; two coins dug up in the Courtyard; various newspaper reports and magazine articles, 1952. Also plans of alterations, with date 1960 added but more likely to be of the 1950s work. *One folder, plus one roll stored separately*
- MAN5.2** Black and white photographs of clock tower repairs, details of rebuilding celebration, 1979. *One folder*
- MAN5.3** Conservation report, on the dining room, staircases and wall paintings, 1996. *One black binder*
- MAN6** **Contents**
- MAN6.1** **Pre-20th century**
- MAN6.1.1** Inventories: 18th century (photocopy, original HALS D/ELw E2). *One folder , copyright HALS*
- MAN6.2** **Acquisitions**
- MAN6.2.1** Plans of a chair made from wood from the Manor, 1937 and pictures taken in 2008. *One folder*
- MAN6.2.2** Note on recently acquired pictures in the manor, 1986. *One small item in folder*
- MAN6.3** **Theft and sale of paintings**
- MAN6.3.1** Correspondence etc, with Sir John and Lady Lawes about their pictures on loan to Rothamsted, 1953 – 1980. *One folder*
- MAN6.3.2** Lists of pictures, newspaper cuttings, photographs and statements concerning the theft, 1979 – 80. *One folder*
- MAN6.3.3** Sotheby's sale catalogues, 1979, 1980. *Six catalogues*
- MAN6.3.4** Correspondence, valuations, sale details etc on sale of pictures by Sir John and Lady Lawes and on LAT purchases, 1979 – 81. *One folder*
- MAN6.3.5** Illustrated list of paintings sold by the Lawes family, compiled from sale catalogues by Roger Plumb, 2008. *One folder*

- Other sales**
- MAN6.4.1** Inventories of furniture and heirlooms, 1930s and of contents, 1940. *One folder*
- MAN6.4.2** Catalogue of 17th century library at Rothamsted for sale by Hodgsons for the Lawes-Wittewronge Will Trust, 1936. *One catalogue and one photocopy*
- MAN6.4.3** Correspondence, photographs etc on sales and attempted sales by Bonham's and Sotheby's of pictures including the Flemish Last Supper and Tillman still life, 1980. *One folder*
- MAN6.5** **Transfers**
- MAN6.5.1** Correspondence on the deposit of Wittewronge and Lawes family and estate records, formerly in the Manor, to Hertfordshire Record Office, 1967; further correspondence on making this deposit a gift, 1977. *One folder*
- MAN7** **Gardens and grounds**
- MAN7.1** Notes, newspaper cuttings and colour slide relating to the Manor ice house, cleared in the early 1980s. *One folder*
- MAN7.2** Letters about a seat near the croquet lawn in memory of David Wylie-King (at Rothamsted 1947 – 81). *One folder*
- MAN8** **Estate**
- MAN8.1** Photograph of 13th century deed referring to Rothamstedefeld and related letter, 1898. *Two items; the original deed is at HALS but the reference isn't obvious from the HALS catalogue.*
- MAN8.2** Catalogue for sale of growing crops from Rothamsted Park Farm, 1834. *One item*
- MAN9** **Administration**
- MAN9.1** Manor Residents' Committee minutes, circulars and letters, c1980 – 2006. *One folder, received from Norman Carreck in 2006 with covering letter, not sorted or appraised; not available for consultation, consult librarian*
- MAN10** **Miscellaneous**
- MAN10.1** Water wheel sketch on tracing paper dated 1901. *One folder*
- MAN10.2** Letters asking for photographs of portraits at the Manor, from Robert Bolleurs on a possible portrait of Sir John Wittewronge by Rembrandt, 1969 – 70 and from J Everdij on portraits of Mary Everday, 1976 – 7. *One folder*

- MAN10.3** Insurance plaque for County Insurance, undated, probably 19th century. *One item*
- MAN10.4** Letters and reminiscences from code-breakers stationed at the Manor during World War II, 1995 onwards.
One folder; access restricted, consult Librarian
- MAN10.5** Photographs of Stantonbury church interior and exterior and the surrounding area, probably taken early 1950s for the Guide to the Manor of Rothamsted. *One folder*



ROTHAMSTED
RESEARCH

Library & Archives

MET

Meteorology, 1840s onwards

Extent and form:	75 boxes numbered before transfer, 23 other boxes, 25 volumes and one bundle in adequate condition, with some items not in archive quality packaging, one filing cabinet, one large box
Location:	Store
Administrative history:	Created at Rothamsted
Custodial history:	Some older papers were in the annexe strongroom in 1984; others have been transferred 1984 – 2011 from within Rothamsted
Accruals:	Possible
Existence of copies:	None known
Related material at Rothamsted:	See PROD for papers on rainfall and drainage
Related material in other repositories:	None known but some meteorological data was recorded at Rothamsted and sent elsewhere, eg to the Meteorological Office
	Updated 4 July 2011

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

Measurements of weather and related phenomena have been recorded at Rothamsted in increasingly structured formats since the mid 19th century. The information collected was essential to the experimental work and papers were published on rainfall and drainage.

Most of this series is meteorological returns and records. There are also volumes noting weather conditions and related matters, plus a few current affairs, from the mid to late 19th century and some miscellaneous weather related papers collected and created by Rothamsted.

Much of this series would merit further examination and possible renumbering and rearrangement as it has not come systematically or regularly to the Library Archives.

- MET1** **Meteorological returns, 20th century**
Transferred to the archives in the mid 1990s and from Farm/Field Experiments in 2002
- MET1.1** Returns, mainly from Rothamsted, a few from Woburn, 1921 – 2004:
Recording rain gauge charts
Thermograph/Hygrograph charts
Barograph charts
Daily weather sheets, original
Daily summary and weekly sheets
Wind charts and analysis sheets
75 boxes numbered 1 – 95, with gaps, partial list in the first box
- MET2** **Meteorological records, mid – late 19th century**
Found among the archives in the annexe strongroom in the 1980s, so transferred before 1984
- MET2.1** Notes on sowing dates, sheep weights, 1840s, rainfall, temperature, burning and drying, 1848 – 9; tables of water collected in large and small drain gauges, with dates, times and some weather observations, 1853 – 68. *One volume*
- MET2.2** Fair copies of notes in previous volume, 1853 – 84, plus additional calculations to 1873. From 1873, there are figures from rain and drainage gauges in Barnfield, wind directions and, from 1878 maximum and minimum temperatures, notes on weather conditions and occasionally on local and national events. *One volume*
- MET2.3** 1885 – 1904 containing similar information to MET 2.2 above. *One volume*
- MET3** **Meteorological returns, mid – late 19th century**
Transferred to the archives in the 1990s
- MET3.1** Copies of data from observations at Harpenden Common and Rivers Lodge sent to the Meteorological Office, 1873 – 96. *22 volumes, many with spine damage, and one bundle*

- MET4** **Miscellanea**
Found among the archives in the annexe strongroom in the 1980s
- MET4.1** Printed meteorological tables by Bennet Woodcroft, 1854 – 5, including the weather in the Crimea, sold in aid of the Patriotic Fund; weather chart for November 1828 and temperature graphs, 1872, 1873. *One folder*
- MET4.2** Letters from the Meteorological Office on weather returns, 1876 – 84. *One folder*
- MET4.3** Statistics from Meteorological Office weekly weather reports including details from Rothamsted, 1880s – c1900. *One folder*
- MET4.4** ‘Miscellaneous Meteorological Data’ with figures from drain gauges, 1878 – 1932, including work by RS Koshal, atmometer readings, 1921 – 30, correspondence with the Meteorological Office and with individuals, 1934 – 9. *Seven files in one bundle, possibly once held in the Statistics Department*
- MET4.5** ‘Composition of various Well Waters’: analyses of well waters, including wells in Harpenden, 1879 – 93, with printed ‘Specification of Thomas Clark for purifying and softening water’, and notes, 1860s – 1900s. *One bundle*
- MET4.6** ‘Hay Harvest forecasts from the Meteorological Office’: reports on Rothamsted weather and forecasts from the Meteorological Office, 1879 – 98. *One bundle*
- MET4.7** JH Gilbert’s correspondence on the publication of ‘Some illustrations of the Connection of Aggregate Temperatures and Agricultural Production,’ 1886, including letters from other scientists and a French translation of the paper. *One folder*
- MET4.8** ‘Bright sunshine recorded in the Rothamsted Allotment Gardens’ 1891 – 1910. *Seven files, which form a complete series as bright sunshine recording started in 1891 and the last file here says ‘subsequent to December 31 1909 the Sunshine cards have not been copied’.*
- MET4.9** Tables, notes and newspaper cuttings on rainfall and climate in Rothamsted and elsewhere, including Scotland, Hertfordshire and London, mid 19th – early 20th centuries. *One bundle*
- MET4.10** Completed forms B with meteorological statistics from Craibstone, Aberdeen, Sprowston, Norfolk and Wye, Kent, 1924 – 8. *Three files*

- MET4.11** Printed observers' handbook for the British Agricultural Meteorological Scheme and reports on phenological observations in the British Isles, 1925 – 9. *Five pamphlets*
- MET4.12** Correspondence with universities, local authorities, agricultural colleges, MAF and the Meteorological Office about the British Agricultural Meteorological Scheme, with committee minutes, information circulars and progress notes, 1929 – 30. *Eight folders in one bundle*
- MET5** **Meteorological records, mid 19th – mid 20th century**
Transferred from Statistics in 2002 and from the Fertilizer Building by Paul Poulton in 2008. Mostly small notebooks, some of which have traces of an earlier numeration
- MET5.1** Barometric observations, 1862 – 3. *One notebook*
- MET5.2** Notebooks recording rain and drainage water collected, plus occasional notes on the weather and the condition of the equipment, 1873 – 1904. *16 notebooks, numbered A3 – A18*
- MET5.3** Notebook recording drainage through 18 inch pots, 1874 – 6. *Two notebooks, one previously numbered A23*
- MET5.4** Rain and drainage figures, 1904 – 13, 1915 – 30, with comparisons of averages from earlier years. *Five notebooks, two previously numbered B8 and B9*
- MET5.5** Edwin Grey's notebooks of 'Daily Meteorological Records' 1891 – 4, 1897 – 1910. *Six notebooks, previously numbered A24 – A27, B11 and B12*
- MET5.6** River's Lodge meteorological records, 1910 – 27. *Three notebooks*
- MET5.7** Barnfield meteorological records, 1925 – 30. *Two notebooks*
- MET5.8** Ground thermometer records, 1915 – 30. *Five exercise books, some previously numbered B1 – B5 and one exercise book and three notebooks, previously numbered 8 – 10*
- MET5.9** Barometric pressure recordings, 1903 – 16. *Two notebooks, previously numbered B6 and B7*
- MET5.10** 'Pocket Registers of Normal Climatological Observations', Rothamsted (cloud, heat, pressure, rain, wind, general weather), 1915 – 30. *11 hard cover notebooks, some numbered B13 – B20*

- MET5.11** Meteorological Registers and 'Pocket Registers of Normal Climatological Observations', Woburn (cloud, heat, pressure, rain, wind, general weather), 1902 – 64. *42 hard cover notebooks; April 1902 – August 1904 numbered 8 – 11; March 1905 – March 1907 missing*
- MET5.12** Supplementary and additional observations, Woburn, late 1930s – early 1950s. *Four hard cover notebooks*
- MET6** **Miscellaneous numbered folders**
Transferred from the Farm in 2002 and 2004, possibly overlapping with MET7, records transferred from the Farm and Fertilizer Building in 2008
- B1 Rothamsted daily meteorological records, 1968, June 1973 – July 1981
- B2 Rothamsted meteorological records long period summary, 1930 – 66
- B3 Woburn daily meteorological records, 1974 – 81.
- B4 Woburn meteorological records long period summary, 1930 – 67
- B5 Saxmundham meteorological records: correspondence, instructions and blank forms, 1960s
- B6 Saxmundham daily rainfall, 1966 – 78
- B7 'Current Saxmundham meteorology including 16 year means and Saxmundham weekly meteorological record', 1980s
- B7a Saxmundham monthly summaries, 1977 – 85
- B8 Saxmundham annual meteorological summaries, 1968 – 80
- B8a Saxmundham weekly and monthly meteorological record sheets, 1966 – 81
- B9 Saxmundham meteorological summaries, 1960 – 80 and long period summary, 1930 – 66
- B11, B12 Saxmundham meteorological and drainage instrument field and laboratory sets, 1930s, 1940s
- B13 Roth, Woburn & Sax Comparable Met Data
- B14, 15 Solarimeter notes and instructions, 1960s – mid 1970s
- B16 Saxmundham evaporimeter results, 1967 – 81
- B17 Drainage tables, mainly undated, ?1970s
- B20b Rothamsted, Saxmundham and Woburn: tables of rainwater evaporation, 1969 – 79
- B22a Saxmundham drainage tables, 1966 – 80
- B22b Saxmundham drains recharge data, 1963 – 73
- B25 Rothamsted, Saxmundham, Woburn and elsewhere: silicon in drainage waters and rain, 1974 – 81
- B26 Saxmundham: key elements lost on drainage, 1975 – 9
- B27 'Miscellaneous drainage papers', 1970s
- B52 Notes on Saxmundham drainage, 1960s, pamphlets, 1934,59,65,66, aerial photograph, 1965
- B53 Estimates and notes on Barnfield and Broadbalk

drainage, 1970s with unnumbered envelope 'Proposals for Barnfield Drainage. Barnfield Pit 1973
C9 Saxmundham root growth investigations
C30 Notes on Geescroft drainage, 1971
Total three boxes, files previously numbered and not renumbered; see ST6 in the Saxmundham and Tunstall collection for other Saxmundham meteorological records, 1973 – 87.

- MET7** **Meteorological records, 20th century**
Transferred from the Farm and Fertiliser Building in 2008, possibly overlapping with MET6, records transferred from the Farm in 2002 and 2004
- MET7.1** Meteorological Station Instrument Book, begun by HV Garner, 1921, recording readings and maintenance, August 1921 – July 1974. *One volume, numbered 456*
- MET7.2** Radiation figures, October 1921 – December 1988, with gap May 1922 – September 1923. *Ten notebooks*
- MET7.3** Evaporation figures, February 1948 – December 1963. *Three notebooks*
- MET7.4** Sunshine record cards, 2000 – 4, plus three mounted from 1993. *One box, overfull*
- MET7.5** Rothamsted daily weather summaries, March 1975 – March 1989, January 1994 – March 1998, excluding October – December 1987 and April 1989 – December 1993. *One box*
- MET7.6** Rothamsted weekly weather summaries, 1923 – 88, 1994 – 6, excluding 1985. *One file*
- MET7.7** Rothamsted monthly weather summary, 1946 – 2000. *One file*
- MET7.8** Rothamsted monthly rainfall and drainage, 1923 – 42. *One file*
- MET7.9** Rothamsted monthly rainfall, 1943 – 2000. *One file*
- MET7.10** Rothamsted monthly sunshine and mean temperature, 1924 – 74. *One file*
- MET7.11** Rothamsted monthly sunshine, 1975 – 2000. *One file*
- MET7.12** Rothamsted monthly temperature, 1975 – 2000. *One file*
- MET7.13** Met Office rainfall charts for Rothamsted, 1965 – 1971. *Three narrow microfilms*

- MET7.14** Woburn daily weather summaries, 1988 – early 1998. *One box*
- MET7.15** Drainage charts, Rothamsted and Woburn, 1978 – 86. *Seven boxes*
- MET7.16** Barometric pressure measuring charts, Rothamsted, 1990s. *One box; some items too large for box*
- MET7.17** Barometric pressure measuring charts, Woburn, 1990s. *One box; some items too large for box*
- MET8** **Folders transferred early 21st century**
Transferred by Tony Scott of Soil Science in 2008
One three drawer filing cabinet, contents not examined
- MET9** **Charts transferred early 21st century**
Transferred by Tony Scott of Soil Science in 2011
Wind charts, January 2005 – October 2010. *One large box*



ROTHAMSTED
RESEARCH

Library & Archives

MIC

Microbiology, 1950s – 2000s

Extent and form:	Six boxes, three holding photographs, glass plates and slides
Administrative history:	Most items created at Rothamsted; some donated 2010
Custodial history:	Kept with the creator or in the department and its successors at Rothamsted until transferred to the archives in the mid 1990s and 2010
Accruals:	Possible. These are archives of one person. The whereabouts of archives of other workers in microbiology is not known in 2009
Existence of copies:	Copies of printed papers will be in appropriate journals
Related material at Rothamsted:	None known
Related material in other repositories:	Not known but possible
	Updated 12 January 2012

Access and Copyright:

Contact the Librarian:

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A General Microbiology Laboratory is first mentioned in the 1925 – 6 Rothamsted report. The Soil Microbiology Department was formed about 1939 – 45 by the amalgamation of the Bacteriology and General Microbiology departments. In 1983 it was part of the Soils Division and in 1987 was part of Soils and Crop Production.

The archives below are those of one member of the department only. Dr Barbara Mosse was in Rothamsted Soil Microbiology Department from 1954 – 80 and was a pioneer of research into mycorrhizal fungi.

MIC1 Barbara Mosse, died 2010

MIC1.1 Glass negatives of mycorrhiza taken from c the mid 1940s to the early 1960s, stored in brown envelopes with detailed descriptions. The earlier ones date from the time when Barbara Mosse worked at East Malling Research Station. There is an accompanying “List of Lantern slides” (stated to be 2” x 2” whereas Lantern slides per se are c 3” x 3”). The reference numbers on the list do, however, correspond to the numbers assigned to the negatives and to some of the glass slides in the Box below. *One non archive quality box*

Black and white photographs in 14 folders, undated but some with identification and/or reference numbers; one notebook, 1940s, 50s. Also a box of 35 mm glass slides and transparencies. Some of the glass slides have numbers that correspond to numbers on the list in the Box above. *One box*

Black and white photographs, undated, most identified. *One large divided folder in one box*

MIC1.2 Published papers including joint papers, 1950s – 2000s (no way of knowing if this is a complete series). *One large bundle*

Published papers and extracts from papers written by others, including some used by Dr Mosse for reference and sent to her for comment. *One large bundle*
These two bundles are in one box

Notes and some published papers brought together by Dr Mosse and identified by her as

Axenic Culture

Bonfanta reprints

Carbon Drain

Geosyphon reprints and letters plus Bécard C¹⁴O₂.

Biancotto/Bonfante endobacteria in AM fungi

Guillaume (Bécard)

Interactions with other micro-organisms

J Garbaye INRA

Jacques Mugnier

Jean Garbaye

Munns

Mycorrhiza, EM pictures, Sexuality, Various notes, more or less current suggestions

Nutrition, heavy metal toxicities, techniques, new ideas

OPPP pathway; significance of CO²; literature on dark fixation of CO²

13 envelopes and folders in one box, probably including duplicate printed papers

Letters from fellow scientists, invitations, comments etc.

Personal photographs, cv and list of publications.

Miscellaneous notes for papers, lectures etc, some of which may overlap with box 2.

Three folders, one ring binder in one box



ROTHAMSTED
RESEARCH

Library & Archives

MSS

Manuscripts relating to agriculture, 17th – 19th centuries

Extent and form:	One box, mainly paper documents in reasonable condition, some bound into volumes
Location:	Annexe
Administrative history:	Bought in the 1920s and 1930s from salerooms and private individuals
Custodial history:	In annexe strongroom before 1984
Accruals:	Unlikely
Existence of copies:	Copies of some items have been supplied to the Banks Archive Project, Natural History Museum, London
Related material at Rothamsted:	EJ Russell's correspondence (RUS2) may include letters on acquisitions.
Related material in other repositories:	Most of the collection was transferred to Reading University Library in 1966. There is no supporting paperwork but there is a copy of the Reading University Library catalogue of these documents in the Librarian's room. A few further items were transferred to appropriate county record offices in the 1980s and MSS4 and MSS5 were returned from Reading in 1988.
	Updated 8 August 2011

Access and Copyright:

Contact the Librarian:

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Email: liz.allsopp@rothamsted.ac.uk

These documents have no connection with Rothamsted but are what remains of a collection formed by EJ Russell in the 1920s and 1930s to further his wish to make Rothamsted a centre for the study of the history of agriculture. The rare books and prints in Rothamsted Library were acquired for the same reason. A list in Rothamsted Library illustrates the breadth of the original agricultural documents collection.

Later directors did not develop the idea of an agricultural history centre and most of the documents were distributed to other institutions in the 1970s.

- MSS1** Bond of Hugh Taylor of Walderton, Sussex, gentleman, to Richard Platte of London, 1592. *One document*
- MSS2** Letter from Arthur Young asking for employment, 1782. *One document*
- MSS3** Autograph letters of HL Duhamel de Monceau, agriculturalist, 1753 – 67. *Five documents*
- MSS4** Correspondence and other papers of Sir John Sinclair and others, 1779 – 1807. *One volume*
- MSS5** Correspondence and other papers of Sir Joseph Banks, mainly letters to Banks from Sir John Sinclair and others, 1783 – 1814. *One volume*
- MSS6** Letters from Sir John Sinclair (mainly) and others to Sir Joseph Banks, with some drafts by Banks referring to the Board of Agriculture, 1794 – 1804 and documents relating to establishing the Institution for Diffusing the Knowledge of Useful Mechanical Inventions, 1799 (the Royal Institution). *One volume*
- MSS7** Letters on coinage, corn prices and foreign affairs from Lord Liverpool to Sir Joseph Banks, with a few draft replies, 1797 – 1804. *28 letters*
- MSS8** Plans of battles in Europe, c 1818. *One volume*
- MSS9** Letters from Eleanor Ormerod, entomologist, to Parlour of Darlington about insect attacks on wheat, 1885 – 9. *One bundle*;
See RUS2.5 bundle 6 for a letter from W Parlour to EJ Russell about buying cattle prints.
- MSS10** Envelope labelled 'Mummy wheat sent to Rothamsted by Sir Wallis Borge. See letters in the Times', 1934. *One envelope*



ROTHAMSTED
RESEARCH

Library & Archives

PC

Papers and correspondence Bound volumes of letters and papers relating to experiments, 1840s – 90s

Extent and form:	19 volumes of bound letters and papers, one index binder, reasonable condition; many of the letters are to JH Gilbert but the index (PC20) is inadequate Annexe
Location:	
Administrative history:	Brought together from JH Gilbert's correspondence and records of experiments, probably during the directorship of EJ Russell in the 1920s and 1930s
Custodial history:	Originals created and stored at Rothamsted, 1840s onwards
Accruals:	Unlikely
Existence of copies:	None known
Related material at Rothamsted:	None known
Related material in other repositories:	None known but many of the letters are replies to letters from JH Gilbert, which may be in other repositories
	Updated 22 January 2011

Access and Copyright:

Contact the Librarian:

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It is not clear why some letters and papers were taken from their original bundles and bound together to form these volumes. The most likely explanation is that this was part of the director EJ Russell's wish to make Rothamsted a centre for the study of agricultural history.

The volumes include letters from prominent scientists but the contents are not arranged systematically, the summaries below are not comprehensive and the index is inaccurate and inadequate.

- PC1** 1844 – 74: ash analysis
- PC2** 1855 – 67: dispute with Liebig; papers on experimental wheat in Kent; composition of wheat; composition of animal food; superphosphate analysis; permanent meadowland; Woburn wheat; E Pugh; woody fibre and T Segeleke.
- PC3** 1854 – 81: general administration.
- PC4** 1853 – 1901: general administration; rainfall and drainage.
- PC5** 1860 – 7: nitrogen; phosphate supplies; animal feeding experiments; cattle transport; work of Liebig and Voit; barley and malt experiments.
- PC6** 1862 – 80: sewage; RHS Scientific Committee; Rivers Pollution Commission; Sewage Commission
- PC7** 1860 – 93: Robert Warington junior; animal fat experiments; cereals in South Australia; sugar beet experiments; H von Liebig.
- PC8** 1872 – 98: barley, sewage, beet manure and grass experiments; JL Thudichum and J von Liebig; Woburn soil; loans for exhibition; administrative matters; weather returns.
- PC9** 1880 – 4: meteorological observations; British Association address; rainfall and drainage; bread reform; cellulose; nitrogen; chlorophyll; clover; BJ Grosjean; Society of Chemical Industry; animal food.
- PC10** 1884 – 1901: Montreal address; A Voelcker; work on manure, animal food, allotments and nitrogen; cattle weights; J Mason; grass, nitrogen and sheep experiments.
- PC11** 1890 – 1900: grain valuations; agricultural education; publications; Chicago exhibition; Rothamsted jubilee.
- PC12** 1895 – 1900: animal, barley, wheat and manure experiments and publications.
- PC13** 1897 – 1901: Robert Warington junior; Royal Commission on Agricultural Depression; Beer Materials Committee; sugar beet; milk production; barley; segment grater; Wibourg phosphate; permanent grassland; Rouna's book on Rothamsted, loans.

PC14 1900 – 1: Paris exhibition; B Dyer's American lectures; unexhausted manures; C Daubeny.

PC15 1860s – 1904: Robert Warington junior; testimonials.

PC16 1896 – 8: Beer Materials Committee.

PC17 1863 – 1900: wheat crop.

PC18 1848 – 82: business papers.

PC19 1840s onwards: tables.

PC20 Index.



Library & Archives

PHO

Photographs and other pictorial material

Extent and form:	Seven boxes, seven loose albums, one roll and one bundle,
Administrative history:	Created and collected at Rothamsted
Custodial history:	Most in Annexe strongroom before 1984; others found throughout Rothamsted
Accruals:	Possible
Existence of copies:	Likely, eg of staff photographs
Related material at Rothamsted:	EJ Russell's photograph albums, RUS3 , in the Library Archives. Other photographs in VCU and the Archive of Scientific and Farm Equipment. 1930s picture of the site by Herry Perry displayed in the Bawden Building 2011
Related material in other repositories:	None known
	Updated 16 December 2011

Access and Copyright:

Contact the Librarian:

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The collection of photographs and other pictorial items listed below starts with pictures of Rothamsted's founders and continues into the present century. They are loose and in albums. Items relating to Rothamsted include formal and informal pictures of the site and of staff and a few drawings and paintings, some of which may have been prepared as teaching aids. The collection also includes pictures of 19th century scientists and photographs of agriculture in England and occasionally overseas.

Some photographs were taken by outside bodies for publication in newspapers and magazines. These studios may still exist, possibly under a different name, so please ask the Librarian about copyright and reproduction

A photographer is mentioned for the first time in the staff list in the 1923 annual report. The Rothamsted Visual Communications Unit/VCU has a large collection of photographs but it is not catalogued

PHO1 JB Lawes and JH Gilbert

PHO1.1 Photographs, drawings and prints of JB Lawes, JH Gilbert and their close families, 19th century. *One box*

PHO2 Staff, site and experiments

PHO2.1 Photographs of the site, the interiors and exteriors of buildings, staff, directors, machinery etc, late 19th and 20th centuries where the photographic studio or photographer can be identified.

PHO2.1.1 Rothamsted fields, buildings, staff and work, external studios and photographers

Aerofilms: tractors, one with a trailer and advertisement for Lawes' disinfectant, probably 1920s; aerial views of site/farm, 1954 (in green folder); 1968, 1969 and earlier undated; correspondence about aerial photography, 1949 – 54, 1961.

Architect, the: Russell building interior and entrance hall, 1917

Associated Press: Broadbalk Wilderness, staff in laboratories, Suffolk Punches, one photograph dated 1938.

Bradley RH (temporary Rothamsted staff member): site from the air.

Central Press Photos Ltd: buildings including laboratories and equipment, glass houses, farm, insectary, library, and Russell building; staff including Bawden, Bremner, Crawley, Game, Hopkins, Lord, Nixon (with first electron microscope), North, Rickson, Watson, Wilkinson, probably 1950s.

Country Life: general views, 1943

Daily Mirror: electron microscope, clover, lettuces, 1944

Daniel of Ford Motor Co., Dagenham: tractors, 1940

Farmer and Stockbreeder: pig feeding experiments, 1934

Fox Photos Ltd: botany department water culture experiments, 1942; Land Army gang refreshment break and WVS van

Frederick Thurston: various items in display cases, captions in French so possibly showing preparations for an exhibition, late 19th century

Henk Snoek/Snoek-Westwood: site buildings, interiors and exteriors, 1966 – 7

Humphrey Joel: drain gauge, laboratories, library, undated, probably 1950s

Keystone Press: laboratories and farm with staff, not identified, 1939.

- 1 Effect of fertilizers on wheat
- 2 'The most famous land drain in the world'
- 3 Suffolk Punches
- 4 Manure shed
- 5 Russell building and commemorative stone
- 6 Horse and tractor ploughing
- 7 96th crop from Broadbalk, *missing*
- 8 Sheep
- 9 Tractor ploughing
- 10 Insecticide investigations, breaking up soil
- 11 Insecticide investigations, counting insects from soil
- 12 Plant Pathology, transmitting virus diseases
- 13 Plant Pathology, inoculating plants
- 14 Plant Pathology, recording plants
- 15 Plant Pathology, student taking notes
- 16 Plant Pathology, examining cultures
- 17 Fermentation, testing sewage effluents
- 18 Botany, identifying grasses
- 19 Bacteriology, growth of protected seedlings
- 20 Chemistry, grinding soil for analysis

Keystone: staff: Rolt, Sage (Botany), Custance, Walker (Plant Pathology), 1940

London News Agency/LNA: exhibition for Regina, 1933; staff: Cunow, Turner, Watson (Plant Pathology), Cashen, Russell, Tamhane (Physics), Hall, Walker in sample house, 1938

London News Agency/LNA: staff: Baty (Physics) Gough (Plant Pathology) Hogg/Rolt (Bacteriology) Sage (Botany), 1941

London News Agency/LNA: unidentified staff in glass houses, laboratories and sample house, probably 1940s

London News Agency/LNA: unidentified staff in glass houses and laboratories and aerial views of glass houses, probably 1940s

Pacific and Atlantic Photos: insectary, staff at work in glass houses and laboratories, Browne, Davidson, Handschin, unidentified, 1927

Photopress: unidentified staff in laboratories, one dated 1935

Pictorial Press: equipment and staff most unidentified plus Bishop (Botany) Bradley (Plant Pathology) Green Kelly, Gillum and Smith (no department), probably 1940s

Sport and General Press Agency Ltd: electrical equipment at the farm demonstration, 1936

Sport and General Press Agency Ltd: Annual Gathering, 1937

Sport and General Press Agency Ltd: buildings, experiments, equipment, experimental fields, 'helping to win the war by science', laboratories, machinery, staff, (Crook, Garner, Garrett, Kleczowski, Ogg, Russell, Williams) visitors (Bledisloe, Hudson, Norfolk, Radnor, Reventlow, Salisbury, Sobolev, Zonoff) 1930s, 1940s

Sport and General Press Agency Ltd: experimental fields, farm and laboratories, some showing staff including Dyke, probably 1950s

Sunday Pictorial: Watson (Plant Pathology) c1940 and two staff.

Sun Photographic Bureau: farm machinery, probably 1960s

The Times: turnip experiments in glass house; cows feeding, both undated probably 1950s

PHO2.1.2 Photographs taken by Rothamsted photography department

International harvester tractor 'Titan' first used 1919; buildings, equipment; experimental fields; machinery; Orion computer; pig

bell; pudding stone; staff; female staff working on Park Grass during or shortly after the War showing masts on Manor roof; views from the air, 1940s – 70s

PHO2.1.1 and PHO2.1.2 are in one box

PHO2.2 Photographs of staff and others

PHO2.2.1 Staff members, visitors and others, individuals and small groups

Allen, Dr ON and Mrs Allen
Armstrong, Henry Edward, FRS
Arnold, Lucy; Munt, Olive; Staines, Mona, 1935
Barnard, Mildred 1935
Barnes of Woburn, 1934
Barnicot, W, MBE, LAT secretary 1920 – 46
Bigg, C, caretaker and ashburner and Rumball S, laboratory assistant
Bledisloe, Lord and Lady (one folder)
Budden, Lt W, 1916
Butler, Colin, 1976
Clinton, Lord 1937
Davies, botanist in charge of 1877 separations
Grey E and G Lawrence seed sowing on garden clover plot, 1921
Grey E and Mr Wells of the Potash Syndicate in Barnfield, possibly late 1880s (there are other photographs of E Grey in STA1)
Hall, AD, director (two)
Havas, Laszlo (Plant pathology) and family
Hawkins and Pearce, 1935
Heintze, Miss SG, 1936
Herrod-Hempsall, Morland, Tan
Hutchinson, HBH
Immers, FR of Minnesota
Keen, sub lieutenant
Kleczkowski, Nina
MacTennan, captain
McDougall, R 1934
Marshall of Canada 1936
Miller, HG
Morland and Rolt, 1935
Nutman, Dr PS
Oden, Sven and Singh, Karak 1921
Oggelsby, Arthur, died 1953
Pugh, Evan
Russell, EJ and Tkatchenko, 1935
Richter, Dr, Berlin
Samuel, L, physics, 1933 – 5
Salisbury, Frank

Sen Gupta, N, microbiology; Raychaudhuri, chemistry 1934 – 6
Shrikhande JG, fermentation and baby Nicol, 1933

Tamhane, the first example of a second generation of voluntary workers, 1955

Taylor, CB, bacteriology 1933

Thornton, Sir Henry Gerard

Warrington, Robert junior

Wallis, EC and companion

Willis, John James, botanist, 1862 – 1911

Wodek, Professor

Most of these photographs are in one folder, together with two unidentified photographs. The photographs of Bledisloe are in a separate folder and those of Clinton, Thornton, Warrington and Willis are too large for a folder and are loose in the box. A few have the photographer or studio identified.

PHO2.2.2 Group photographs of staff, boxed

Harvesting 1893, original and postcard

Staff, manor employees or unidentified group, c 1900

Staff 1910, identified

'Tea party Sept 1910' male staff, identified

Staff 1912, a few identified

Staff having tea outside, 1911 or 1912, two postcards, some staff identified

'Rothamsted lab people' 1913, two old and two modern copies

Soldiers in Rothamsted Park 1916, postcard

Heads of Departments: RAF (Fisher), JHS (Henderson Smith), ADI, DWC (Ward Cutler), early 1920s

Crowther, EM; Gregory, FG; Page HJ; Sen Gupta, N; Singh, Karak; Winter, RM, 1921

Staff outside Russell building, showing wartime use of ground for vegetables, undated, possibly taken for 1943 jubilee, two copies, one fragile

Olive Coleman's retirement party c1973

Staff, most probably retired staff, c1970, identified

All these photographs are in one folder

PHO2.2.3 Group photographs of staff, loose

Staff 1912, a few identified on smaller boxed copy

Staff 1918/9, two copies, one identified

Staff 1918/9, taken at the same time as the group above

There are framed copies of these photographs in the Rothamsted Archive of Scientific and Farm Equipment

PHO2.2.4 Silhouettes and identifications of the loose group photographs (PHO2.2.3); scanned copies of photographs of the Testimonial

Laboratory and Russell Building, and of the testimonial laboratory interior (originals in the Rothamsted Archive of Scientific and Farm Equipment). *One folder*

PHO2.2.5 Group photographs of staff by department

Identified and taken in 1958 to mark Sir William Ogg's retirement: Bee, Biochemistry, Botany, Canteen, Chemistry, Commonwealth Bureau of Soils, Dunholme Field Station, Entomology, Farm, Hall of Residence, Imperial College, Insecticides, Library, Administrative, Clerical and Photography, Maintenance, Nematology, Pedology, Physics, Plant Pathology, Soil Microbiology, Statistics and Field Experiments, Woburn. *One folder*

PHO2.2.6 Unidentified photographs of individuals and small groups. *One folder*

HO2.2.7 Pictures of scientists

Beijerinck, Berzelius, Black, Boussingault, Brande, Bunsen, Chevreul, Christison, Dalton, Davy, Dehérain, Dumas, Fownes, Gay-Lussac, Gmelin, Graham, Gregory, Horsford, Hufman, Huxtable, Kane, Kinch, Laviosier, Lavosier, Liebig, Mitscherlich, Morfit, Muspratt, Playfair, Priestley, Rose, Thomson, Ure, Wohler, Wollaston

Etchings of directors AD Hall, WG Ogg and EJ Russell are catalogued in ADH, DIRS and RUS as ADH10.2, DIRS1 and RUS1.4, and are framed and stored under the annexe stairs.

**PHO2.3 Site
First laboratory**

PHO2.3.1 Exterior (four copies of one view) and interior (one view) possibly dating originally from about 1875, plus explanatory note. *One folder*

PHO2.3.2 Testimonial Laboratory and Sample House

Exterior and interior (many duplicates) including photographs showing Brenchley with grass pickers Basil/Warren, Kingham, and Morgan. One photograph has the date 1854 but this may be the date of the building, which opened in 1855; others are dated 1888 – 1920 or are undated. *One folder, some photographs copyright the Daily Mirror, Humphrey Joel and Rothamsted.*

PHO2.3.3 Russell Building and James Mason Laboratory

Exterior and interior including the greenhouses on the roof and at

the south end, Library and laboratories showing Brenchley, Hannaford Richards, Hutchinson, Jackson, Matthews, Morgan and possibly Pearce, some dated 1920. *One folder, including a pencil sketch of a laboratory interior*

PHO2.3.4 Farm

Buildings, vehicles and machinery including tractors, horse drawn drill, barns and farm manager's house, early – mid 20th century, many undated. *One folder*

PHO2.3.5 Directors' House

Exterior and interior, 1922. *One folder*

PHO2.3.6 Aerial photographs

PHO2.3.6.1 Broadbalk 1925, later copy; site 1930 taken by Air Ministry; site 1955, 1956, 1972, 1976 and undated. *One folder, one item loose in box*

PHO2.3.6.2 Rothamsted and Harpenden, June 1973. *One roll*

PHO2.3.7 Miscellaneous

Decolorisation in clay 1895; Broadbalk bomb hole, 1921 or 1922 (bomb dropped by Zeppelin on the night of 3 September 1916); tennis court opening, 1921; drain and drain gauge, undated; North Building construction, 1920s; Broadbalk and Geescroft Wildernesses 1933; Little Knott I mobile shelter, 1980; sub soil plots and old botany bird cages undated. *One folder, two items loose in box*

PHO2.3.8 Framed and glazed pictures

Watercolours of the Manor by Gwen Marr, 1983; Cherry Cottage and barns by R Welyczko 1985; Director's Garden and Russell Building by GC Barwise 1987; crayon sketch of ploughing, possibly Broadbalk, by E Inez Jones 1919. *Five items stored under annexe stairs*

PHO3 Photograph albums

PHO3.1 General albums

PHO3.1.1 'English Agriculture 1': photographs of Rothamsted 1949 – 1955, many by Aerofilms Ltd. *One large album, many pages unused*

PHO3.1.2 'English Agriculture 3', with photographs of views and farming scenes including Rothamsted, probably 1930s. *One large album*

PHO3.1.3 Untitled album of photographs of demonstrations and trials of machinery for the conversion of waste woodland, 1942. *One album*

- PHO3.1.4** Untitled album of photographs of field and indoor experiments, staff and buildings, early 1940s. *One album*
- PHO3.1.5** Album presented to EJ Russell as a memento of the Cawthron Institute, New Zealand, 1929. *One album*
- PHO3.1.6** Album of very faded photographs of pot experiments, mainly tomatoes, testing effects of soil sterilisation, probably 1911, with unrelated loose letter from A Amos of Wye. *One album*
- PHO3.1.7** Album of domestic and landscape photographs of places in England and Wales, early – mid 20th century, plus one photograph of harvesting barley in Long Hoos field, 1923. *One album*
- PHO.3.2** **Green albums**
Small green photograph albums probably compiled by or for EJ Russell in the 1910s – 40s, and including some copies of earlier items, eg JB Lawes' notebooks. There is no evidence of who compiled them although some of the photographs may have been received from visitors. Most have some loose photographs in a pocket at the end.
- PHO3.2.1** 'Rothamsted fields': photographs mainly of farming, some with captions, including many photographs of sheep and including also photographs of wheat samples, of loaves and of the annual gathering 1934.
- PHO3.2.2** 'Rothamsted laboratory': photographs of the Manor, the interior of the first laboratory, the Testimonial Laboratory, the Sample House, rain and drain gauges, JB Lawes and JH Gilbert's portraits and notebooks, staff, work in progress, groups, visits and the Director's garden.
- PHO3.2.3** 'Rothamsted': photographs of laboratories, staff, work in progress, Red Gables, JB Lawes and JH Gilbert's sunshine register and of a sundial at Madras Cathedral.
- PHO3.2.4** 'Counties – views and experiments': photographs of fields and crops, some identified as Dorset, Kent, Lincolnshire, Norfolk, Surrey and Yorkshire plus soil plans of Kent and Sussex.
PHO3.2.1 to PHO3.2.4 are in one box
- PHO3.2.5** 'Other experimental stations': photographs of buildings and work in progress at Woburn, Harper Adams, Lincluden House Dumfries (with letter) Lea Valley, Thetford and Wye; also in Australia,

Canada, New Zealand, Sierra Leone and unidentified.

PHO3.2.6 'Experimental stations USA and Canada': photographs of buildings and experiments

PHO3.2.7 'Cattle': photographs of prize winning cattle.

PHO3.2.8 Untitled: interior and exterior photographs of unidentified buildings, fields and work in progress, possibly all of Hawkesbury College, New Zealand.

PHO3.2.5 to PHO3.2.8 are in one box

PHO3.2.9 'Fertilizers': loose photographs of Garford, Leeds, Stapleford Abbotts, Essex, Hoos barley and Barnfield mangolds, Aberystwyth, slag making and Nomansland Common.

PHO3.2.10 'Production of fertilizers': photographs of nitrate of lime industry in Norway, phosphate deposits on the Nauru and Ocean Islands, Manchester Corporation Sewage plant and an unidentified sewage plant.

PHO3.2.11 'Implements': photographs of drawings of prehistoric and mediaeval implements, mostly ploughs; photographs of steam and horse ploughs and other agricultural machinery in the British Isles, Germany and North America including photographs of tractor trials at Rothamsted.

PHO3.2.12 'Soils': a few photographs of soils at Redbourn, Wheathampstead, Hambledon and unidentified places.

PHO3.2.9 to PHO3.2.12 are in one box

PHO3.3 **Grey albums**

Four small grey photograph albums probably compiled by or for EJ Russell; most of the photographs are from The Times.

PHO3.3.1 Photographs of the countryside and of agricultural and related subjects in the United Kingdom, Holland and New Zealand, eg hay making, ploughing, and reed cutting, the reclamation of the Zuyder Zee and sheep husbandry, 1930s, plus some loose newspaper cuttings.

PHO3.3.2 Photographs of the countryside and of agricultural and related subjects, eg hay making, ploughing and timber processing in England, Scotland and Canada, plus a copy of an undated picture of Liebig's assistants at Giessen.

PHO3.3.3 Photographs of the countryside and agricultural and related subjects in the United Kingdom and France, eg the use of electricity on a farm, hop picking, cider making and collecting resin, 1930s.

PHO3.3.4 Photographs of the countryside and of agricultural and related subjects in the United Kingdom, eg harvesting, thatching and threshing, late 1930s and early 1940s.

PHO4 **Decorative and educational**

Spring, summer, autumn and winter scenes, probably 1930s.
Four large paintings on chipboard, found on the Farm in 1992, stored under stairs in Annexe

Life and work at Rothamsted 1960s. *Two large preparatory pencil sketches stored under stairs in Annexe; final versions displayed in the Daniel Hall building 2011*

Watercolour paintings of swedes 1923 and mangolds 1927. *Three large, one small painting, unframed, stored under stairs in Annexe*



ROTHAMSTED
RESEARCH

Library & Archives

PROD

Production papers for work begun by JB Lawes and JH Gilbert, 1840s onwards

Extent and form:	50 boxes in the Annexe, mainly paper in reasonable condition; one bag, two bundles, some damage at edges. Seven boxes and five binders in Store, all PROD 8.20, mainly paper in reasonable condition
Location:	Annexe and Store.
Administrative history:	Created at Rothamsted Laboratory
Custodial history:	Probably stored in the laboratory from 1840s onwards; in the annexe strongroom before 1984; some files moved to Statistics, 1970s and returned to the annexe, 1990s; further material added 2009
Accruals:	Possible, the Classical Experiments are ongoing
Existence of copies:	None known
Related material at Rothamsted:	None known
Related material in other repositories:	None known
	Updated 6 October 2011

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

Lawes and Gilbert wrote extensively about their experiments in scientific journals and also gave lectures to scientific societies. The archives below were generated when preparing their papers and lectures. They include notes and drafts, letters about content and printing, abstracts and translations of their own and related papers, plans and diagrams. Subjects covered include their experiments on animal feeding, cereals, grassland, meteorology, nitrogen, root and leguminous crops, rotation, sewage and silage.

Many of the bundles have not been fully examined. Some have had papers taken out, before 1984, and mounted in the PC/Papers and Correspondence volumes. Other archives of experiments are in the DRAF and EXP series

PROD1 Nitrogen

- PROD1.1** Drafts and supporting papers for 'Agricultural Chemistry, especially in relation to the mineral theory of Baron Liebig, JRAS 12, 1851. *One bundle*
- PROD1.2** Production papers for JH Gilbert's address to the British Association in Glasgow, including material used in 'On some Points connected with Agricultural Chemistry' JRAS 16, 1855. *One large bundle; see Ambix volume 37, part 3, November 1990 for 'Leibig, Gregory and the British Association' by WH Brock and S Stone*
- PROD1.3** Drafts of 'On some Points connected with Agricultural Chemistry, being a reply to Baron Liebig's Principles of Agricultural Chemistry' JRAS 16, 1855. *One bundle*
- PROD1.4** Notes and abstracts by JH Gilbert on Liebig's work and related work of others; Gilbert's translation of Liebig's letters 30 – 37; Lady Gilbert's translation of Liebig's Einleitung and other works; English and German newspapers with articles on the controversy between JB Lawes, Gilbert and Liebig, Gilbert's copy of Liebig's 'On the Principles of Artificial Manuring', 1840s – 70s. *One large bundle, formerly C23.1*
- PROD1.5** Letters to JH Gilbert, mainly from A Voelcker and Dr Paul on translating works of Gilbert and Liebig, 1850s, 1860s. *One small bundle*
- PROD1.6** Letters from Liebig to Mechi on JB Lawes and JH Gilbert, science in England and sewage, 1863 – 4, with some typescript copies. *One folder*
- PROD1.7** Production papers for 'On the Sources of the Nitrogen of Vegetation, with special reference to the Question whether Plants Assimilate Free or Uncombined Nitrogen' by JB Lawes, JH Gilbert and E Pugh, Phil. Trans. 1861, 1850s, early 1860s. *Two boxes*
- PROD1.8** Production papers for 'Preliminary Notice of Researches on the Assimilation of Nitrogen by Plants' by JB Lawes, JH Gilbert and E Pugh for the British Association, 1857. *One bundle*

- PROD1.9** Diagrams and drawings relating to E Pugh's work, 1857 – 60. *One large bundle stored separately*
- PROD1.10** *number not used*
- PROD1.11** Production papers for 'On the present position of the Question of Sources of Nitrogen of Vegetation, with some new results and Preliminary Notice of new lines of investigation' Proc. Roy. Soc.43 and Phil. Trans. 180, 1889. *Three boxes*
- PROD1.12** Production papers for 'Preliminary Notice of New Experiments on the Question of the Fixation of Free Nitrogen' Proc. Roy. Soc. 47, 1890. *One bundle*
- PROD1.13** Production papers for 'The Sources of Nitrogen of Leguminous Crops' JRAS 3rd series 2, early 1890s. *Three bundles*
- PROD2** **Rainfall, drainage and meteorology**
- PROD2.1** Production papers for 'On the Amounts and Methods of Estimation of Ammonia and Nitric Acid in Rainwater' Rep. Brit. Assn., 1854. *One bundle*
- PROD2.2** Production papers for 'The Effects of the Drought of 1870 on some of the Experimental Plots at Rothamsted' JRAS 2nd series 7. *One bundle*
- PROD2.3** Production papers for 'Our Climate and our Wheat Crops' JRAS 2nd series 16, 1880. *Two bundles*
- PROD2.4** Production papers for 'New Determinations of Ammonia, Chlorine and Sulphuric Acid in the Rain-water collected at Rothamsted, JRAS 2nd series 19, 1883. *One bundle*
- PROD2.5** Production papers for 'On the Amount and Composition of the Rainfall and Drainage Waters collected at Rothamsted' JRAS 2nd series 17 and 18, 1881 and 1882, including tables for rainfall and drainage experiments, continuing into the 20th century, tables relating to Broadbalk and Barnfield drains, references to wells in Harpenden, plans of drains and weather notes. *Three boxes, largely unsorted*
- PROD2.6** Correspondence of JH Gilbert and Voelcker on Broadbalk drainage water, related papers and notes by Gilbert and Voelcker and tables of Broadbalk drainage, late 1860s, early 1870s. *One bundle*
- PROD2.7** Analysis of Broadbalk drainage water, notes on Rivers' Pollution Commission 1st report, pamphlets on London water and Leicester sewage, late 1860s, early 1870s. *One bundle*
- PROD2.8** Plans for Barnfield drainpipes, early 1870s. *One bundle, separate*

- PROD2.9** Plans, notes and specifications for Broadbalk brick drainage trench; also a lysimeter in the Meteorological Enclosure (the 'Bear Pit'), filled c1990. *One bundle*
- PROD2.10** Notes from the Registrar General's report on weather, tables of temperature and weather at Chiswick and Rugby and of temperature and rainfall at Chiswick, Greenwich, Nash Mills and Rothamsted, 1840s – 90s. *One bundle*
- PROD2.11** Tables of Barnfield rainfall and drainage waters, with other rainfall and temperature tables, 1850s – c1916. *One bundle*
- PROD2.12** 'Dates, Hours and Size of Running drains of Bk Wheat Plots Jan 1918 – December 1954', Edwin Grey's notebook, numbered 350. *One volume*
- PROD2.13** Photographs of drain and rain gauges built in 1870, probably prepared c1925 as a teaching aid. *Four items*
- PROD2.14** Report on draining Broadbalk section 9 and diversion of drains 0 – 8 1993. *One paper document and one audio tape*
- PROD3** **Wheat**
- PROD3.1** 'Report on the Experiments on the Growth of Wheat at Holkham Park Farm' JRAS 16, with supporting papers including reference to experiments at Woburn and Rodmersham, Kent, 1850s. *One bundle*
- PROD3.2** Production papers for 'On the Growth of Wheat by the Lois-Weedon System' JRAS 17, 1856. *One bundle*
- PROD3.3** Production papers for 'On some points on the Composition of Wheat Grain, its products in the Mill and Bread', an address to the British Association at Cheltenham, 1856, printed in JCS, 10, 1857, with correspondence, notes on foreign wheat and determinations of wheat quality throughout the world, 1840 – 8, probably relating to the International Exhibition of 1851 but also used for Cheltenham paper. *One bundle*
- PROD3.4** Production papers for 'Report on the Experiments made at Rodmersham, Kent, on the Growth of Wheat' JRAS 23, 1862, with earlier supporting figures from Rothamsted, Woburn and Holkham. *One bundle*
- PROD3.5** Production papers for an address to the British Association in Dundee on 'Preliminary Notice of Results of the Composition of Wheat Grown for Twenty Years in Succession on the Same Land', 1867. *One bundle*
- PROD3.6** Production papers for 'On the Home Produce, Imports and Consumption of Wheat' JRAS 2nd series 4, 1868, using figures from the 1850s – 68; for Jour. Stat. Soc 43 and JRAS 2nd series 16, 1880 using

figures to 1880; for The Field, using figures to 1887 and for JRAS 3rd series 4, 1893 using figures to 1892. *Four bundles*

- PROD3.7** Printed articles issued by the Bread Reform League and The Miller, correspondence of JH Gilbert and Miss Yates, the League secretary and related letter from Graham of University College, London, all with information for Gilbert's 'Letter on Bread Reform' Jour. Soc. Arts, 1880, 1881. *One bundle*
- PROD3.8** Production papers for 'On the Composition of the Ash of Wheat-Grain and Wheat-Straw grown at Rothamsted' TCS 45, 1884. *One bundle*
- PROD3.9** Correspondence relating to the 'Report of Experiments on the Growth of Wheat for the second period of Twenty Years in Succession on the same land' JRAS 2nd series 20, 1884. *One bundle*
- PROD3.10** Production papers for 'The Depression of Corn Prices and the Production of Wheat in some of the chief exporting Countries of the World', JRAS 3rd series 7, 1896. *One bundle*
- PROD3.11** Newspaper cutting, notes and tables relating to a letter on 'The World's Wheat Supply' in *The Times*, with related correspondence, 1898. *One bundle*
- PROD3.12** Tables for Broadbalk wheat, with notes, including notes by JB Lawes, 1840s – c1930. *One box*
- PROD3.13** Notes on work by Wolff on the relationship between plants and manure and by Anderson on beans; other rough notes on the composition of wheat and beans and tables of work at Rothamsted on wheat and beans, 1840s – 60s. *One bundle*
- PROD3.14** Tables for Barnfield wheat, 1847 – 52. *One bundle*
- PROD3.15** Tables with title 'Experiments on Wheat alternated with Fallow and Smith's wheat plots, 1856 – 74, which eventually became the Exhaustion Land Experiments' including tables of ash and dry matter in grain and straw, of manure, of wheat dibbed following Smith's plan, of produce with notes for Plot O and of alternate wheat and fallow, 1850s – 1930s. *One bundle*
- PROD3.16** Tables of results from different varieties of wheat; list and description of wheat supplied to Rothamsted by Hewlins; printed paper 'The Law of the development of cereals, 1860s – 90s. *One bundle*
- PROD3.17** Tables relating to wheat, flour and bread consumption by named families in Harpenden, with more general figures on wheat, flour and bread consumption and notes by JB Lawes, 1869. *One bundle*

- PROD3.18** Valuations of and notes on wheat and barley grown on Broadbalk, Hoosfield and Agdell by Hewlins and Few, with related correspondence, 1889 – 1902. *One bundle*
- PROD3.19** Mounted newspaper cuttings of JB Lawes' annual letters on the wheat crop, related letters from others, 1863 – 1900 and letter by Lawes in *The Echo*, November 1894. *One volume, two bundles*
- PROD3.20** *The Echo*, November 1894 with a letter by JB Lawes. *One bundle*
- PROD4** **Soils**
Some documents from PROD4 were scanned in 2008. There is a list in PROD4.7
- PROD4.1** Production papers for 'On the Accumulation of the Nitrogen of Manure in the Soil' JH Gilbert's address to the British Association in Nottingham, 1866. *One folder*
- PROD4.2** Production papers for 'Determinations of Nitrogen in the Soils of some of the Experimental Fields at Rothamsted and the bearing of the results on the question of the sources of Nitrogen of our Crops' JH Gilbert's address to the American Association at Montreal, 1882. *One bundle*
- PROD4.3** Production papers for 'On some points in the Composition of Soils with results illustrating the fertility of Manitoba prairie soils' JH Gilbert's address in Montreal, 1884. *One folder*
- PROD4.4** Correspondence, newspaper cuttings, timetables and advertisements relating to JH Gilbert's visit to Montreal, 1884. *One bundle*
- PROD4.5** Production papers for 'Nitrogen as Nitric Acid in the Soils and Subsoils of some of the fields at Rothamsted, JRAS 2nd series 19, 1883. *One folder*
- PROD4.6** Tables of average weights of fine dry soils at Rothamsted and percentages of nitrogen at various depths, 1890, with figures from 1840s – 90s. *One folder*
- PROD4.7** Particulars of soil sampling in Broadbalk, 1846 – 1914; sampling for the following dates has been separated into folders and scanned in 2008: 1846, 1856 (with analysis of 1856 Hoosfield soils, also called Smiths' Wheat and Lois Weedon and later the Hoosfield potato experiment and then the Exhaustion Land); 1865 (analysis by H von Liebig); 1865 (with notebook); 1881; 1893 (details re sampling); 1893; 1893 (chemical analysis); 1895 (Upper Butts, later the Wilderness, including comments on plant species). *Eight folders and one box with table of some of the data converted to grammes and then soil weights in Mkg/ha for the first two depths prepared and added December 2007*

- PROD4.8** Particulars of soil sampling in Geescroft, 1857 – 85, with directions for sampling, 1883. *Five folders, four of which were scanned in 2008*
- PROD4.9** Particulars of soil sampling in Agdell, 1867 – 1914. *Six folders, four of which were scanned in 2008*
- PROD4.10.1** Particulars of soil sampling in Hoosfield Permanent Barley, 1868 – 1913, also referring to Hoos Half Acre (alternate wheat and fallow). *Five folders, four of which were scanned in 2008*
- PROD4.10.2** Particulars of soil sampling on Hoosfield Leguminous and Wheat land, 1881 – 98. *One bundle*
- PROD4.11** Particulars of soil sampling in Rothamsted Park, 1870 – 86. *Five folders, four of which were scanned in 2008; one (1870) included descriptions of procedure and of species composition on the three sampled plots; one (1876) also includes references to sampling other fields, especially Hoos barley, 1882.*
- PROD4.12** Particulars of soil sampling in Barnfield, 1870 – 1901. *Three folders, two of which were scanned in 2008*
- PROD4.13** Particulars of soil sampling in Little Hoos, 1873 – 93. *One folder*
- PROD4.14** Particulars of soil sampling in Woburn Stackyard field and Mr Phillips' field, 1876. *Two folders, one of which was scanned in 2008*
- PROD4.15** Particulars of soil sampling in Sawpit, Claycroft and Fosters fields, 1881. *One folder*
- PROD4.16** Particulars of soil sampling in Broadbalk, Hoos fallow and Hoos barley, 1901. *One folder*
- PROD4.17** Lists of samples and analyses of various Rothamsted soils, 1840s – 80s, and analysis of French and Russian soils, c1875. *One folder*
- PROD4.18** Notes on 'various soils', including Irish soils, late 19th century. *One folder*
- PROD4.19** Rough notebooks and tables for sampling Broadbalk, Hoos and Park Grass soils, 1914 – 6. *One folder*
- PROD4.20** Rough notes on Rothamsted soil samples, 1915 – 6. *One folder*
- PROD4.21** Tables of water, per cent and per acre, in different fields, 1860 – 80. *One folder*
- PROD4.22** Tables and notes on nitrogen as nitric acid in various Rothamsted soils, mainly 1880s, with samples from 1860s onwards. *One folder, damaged by damp*

- PROD4.23** Analysis of soils taken from Kitchen Garden and Barnfield for filling 18” pots, 1874. *One folder*
- PROD4.24** ‘Particulars relating to Roots found in samples of Rothamsted soils’ 1846, 1870s. *One folder*
- PROD4.25** Analysis of soil from India (no details) with correspondence and report, 1879; correspondence about a visit from Wilson of India, an engineer and related pamphlet, 1880. *One folder*
- PROD4.26** Tables and notes on nitrogen, carbon and carbonate of lime in deep seated clays based on samples from the Geological Survey Office, London, 1870s – 1900s. *One folder*
- PROD4.27** Tables relating to samples from Rothamsted Garden Clover Soils, 1854 – 97. *Four folders, three of which were scanned in 2008*
- PROD4.28** Tables relating to experiments on the use of Swedish seed, 1875. *One folder*
- PROD4.29** ‘Nitrogen determinations of various crops and vegetation’, early 20th century. *One folder*
- PROD5** **Barley**
- PROD5.1** Production papers for ‘On the Growth of Barley by different manures continuously on the same land; and on the position of the Crop in Rotation’ JRAS, 18, 1857. *One bundle*
- PROD5.2** Production papers for ‘On the Growth of Barley for Twenty years in succession on the same Land’ JRAS 2nd series 9, 1873, with a translation of part of Liebig’s preface to Ueber Gahrung Quelle der Muskelkraft und Ernahrung on the ‘self evident’ ‘truths’ of his theories. *One bundle*
- PROD5.3** Production papers for ‘On the more frequent Growth of Barley in Great Britain’ a talk to the London Farmer’s Club, 1875. *One folder*
- PROD5.4** Tables and lists of samples supplied by Munro and Bevan, authors of ‘Manurial Conditions affecting the Malting Quality of English Barley’, 1890s. *One folder*
- PROD5.5** Hoosfield barley: tables of ash, chemical statistics, dry matter, manures and produce, 1852 – c1915. *One bundle, with many duplicates*
- PROD5.6** Barnfield barley: tables of ash, composition, dry matter, manures and produce, 1853 – 5. *One bundle*
- PROD5.7** Tables, notes and correspondence relating to experiments commissioned by the Board of Trade on losses from barley during

malting, the food values of barley and malt and the use of both in animal feed, 1860s. *Two bundles, one folder*

- PROD5.8** Hoosfield barley straw: tables, notes and correspondence on the investigation of permanent tissue by Bevan, Cross and Smith, 1888 – 96. *One folder*
- PROD6** **Roots**
- PROD6.1** Production papers for 'The Growth of Sugar Beet and the Manufacture of Sugar in the United Kingdom' JRAS 3rd series 9, 1898. *One bundle*
- PROD6.2** Tables and notes on experiments with turnips (swedes) in Barnfield, 1843 – 70. *One bundle*
- PROD6.3** Tables and notes on experiments with mangolds in Barnfield, 1876 – 1916, with picture 1899. *One bundle*
- PROD6.4** Tables and notes on experiments on sugar beet in Barnfield, 1871 – 5. *One bundle*
- PROD6.5** Notes entitled 'large roots' about Dublin and Brockley Park, Ireland and printed report 'On the Composition of some green crops and the undesirability of growing very large roots by Cameron, RSAI chemist, 1874 – 5. *One folder*
- PROD6.6** Data and notes on root experiments in Barnfield, 1847 – 69. *One bundle*
- PROD7** **Leguminous crops**
- PROD7.1** Draft 'Report on the Growth of Red Clover by different Manures, JRAS 21, 1860 with notes and a plan of clover plots, 1852. *One folder*
- PROD7.2** Hoosfield clover: tables of ash, dry matter, nitrogen and produce per acre with notes and diagrams, 1849 – early 20th century. *One folder, one bundle*
- PROD7.3** Hoosfield leguminous land: tables and notes on produce and composition of leguminous plants, 1878 – 1902 and growth of other crops to 1922. *One bundle*
- PROD7.4** Tables and notes on Rothamsted garden clover, 1850s – 1920s. *One bundle*
- PROD7.5** Letters to JJ Willis on red clover disease, 1889. *One bundle*
- PROD7.6** Correspondence, some in German, of JH Gilbert with Noble and others on work on hard shelled clover seed, 1877 – 9. *One bundle*
- PROD8** **Grassland**

- PROD8.1** Tables for work on grassland, mid 1850s – late 1870s. *One large bundle, with many papers damaged, stored separately*
- PROD8.2** Production papers for 'Report of Experiments with Different Manures on Permanent Meadow Land' JRAS, 20, 1858, including botanical notes on grasses at Rothamsted. *One bundle*
- PROD8.3** Production papers for the 'Effects of different Manures on the Mixed Herbage of Grass Land, JRAS 24, 1863. *One bundle*
- PROD8.4** Production papers for 'Further report of experiments with different manures on Permanent Meadow Land, JRAS, 24, 1863. *One folder*
- PROD8.5** Notes and tables on the botany of experimental grass plots for MT Masters of the Gardeners' Chronicle and other notes on Rothamsted grass plots, 1860s, 1870s. *One folder*
- PROD8.6** Draft letter of JB Lawes to Stokes on the mixed herbage of permanent meadow, c1873. *One folder*
- PROD8.7** Tables and lists of samples of Rothamsted Park hay for 'Agricultural, Botanical and Chemical results for Experiments on the Mixed Herbage of Permanent Grass Land conducted for many years in succession on the Same Land, Part III: the Chemical Results' for Phil. Trans. Volume 192, 1900. *One folder*
- PROD8.8** The Gardeners' Chronicle with a report of an article 'Note on the Occurrence of Fungi on the various Plots devoted to Experiments with different Manures on Permanent Meadowland in the Park, Rothamsted' and related notes and correspondence, 1874. *One folder*
- PROD8.9** Analysis of fairy rings in various Rothamsted fields, drafts for 'Contribution to the Chemistry of Fairy Rings' TCS 43 and pamphlet on Fairy Rings by Buckman, 1870s, 1883. *One folder*
- PROD8.10** Production papers for JB Lawes' lecture to the London Farmers' Club on 'Exhaustion of the Soil in relation to Landlords' Covenants and the Valuation of Unexhausted Improvements, 1870. *One folder*
- PROD8.11** Draft of 'Unexhausted Tillages and Manures, with reference to the Landlord and Tenant (Ireland) Act, 1870' and notes and newspaper cuttings, 1875. *One folder*
- PROD8.12** Correspondence, notes, tables and newspaper cuttings relating to 'On the Valuation of Unexhausted Manures' JRAS 2nd series 11, 1875. *One folder*
- PROD8.13** Correspondence, notes, tables and newspaper cuttings and a paper in German by Wolff relating to 'On the Valuation of Unexhausted Manures' JRAS 2nd series 21, 1885. *One bundle*

- PROD8.14** Notes and tables for the 'Final Report of the Royal Commission on Agricultural Depression and the Valuation of Unexhausted Manures, JRAS 3rd series 8, 1897. *One bundle*
- PROD8.15** Notes on Fream's paper 'The Herbage of Old Grass Lands, 1888 – 9 and on the 'rye grass controversy'. *One bundle*
- PROD8.16** Production papers for 'The History of a Field Newly Laid down to Permanent Grass' JRAS 2nd series 25, 1889, using figures from Gilbert's Meadow from the 1860s onwards. *One bundle*
- PROD8.17** Abstracts of results of field experiments with different manures, with figures from 1843 onwards, with notes and drafts and related letters from Ville to JH Gilbert and brief correspondence of Gilbert with Mangou, Barral and Boussingault, 1857 – 8. *One bundle*
- PROD8.18** Tables and notes on botanical separation and the mixed herbage of grass land, 1850s – 90s. *Three bundles*
- PROD8.19** Notes on the composition of artificial manures, farmyard manure and feeding stuff, plus tables, letters and analyses, 1840s – c1900 and Lawes Manure Company circulars, 1861 and 1898. *One bundle*
- PROD8.20** Data sheets, summaries, computer print-outs, diagrams and notes for Highfield and Fosters field ley arable experiments, R/RN1 and R/RN2, 1949 – c1990. *Seven boxes, five binders; see also EXP15*
- PROD9** **Rotation**
PROD9 Production papers for 'Rotation of Crops' JRAS 3rd series 5, 1894, with tables of percentages of dry matter, ash and nitrogen in produce; dry, organic and mineral matter and produce per acre; produce and manure tables and chemical data, all relating to Agdell experiments. *One box*
- PROD10** **Feeding**
PROD10.1 Production papers for 'On the Composition of Foods' a talk to the British Association in Belfast, 1852. *One bundle*
- PROD10.2** Production papers for 'Agricultural Chemistry: Pig Feeding' JRAS 14, 1853. *One bundle*
- PROD10.3** Production papers for 'Experimental Enquiry into the Composition of some of the Animals Fed and Slaughtered as Human Food' Phil. Trans, part II, 149, 1859. *One bundle*
- PROD10.4** Notes for a speech by JH Gilbert to the Chemical Society 'On the Composition of the Animal Portion of our food and on its relation to Bread', 1859, with later notes and tables on the composition of foods, beer and milk in Harpenden c1851, weight, height etc of named

individuals in Harpenden, 1851 – 63 and correspondence with and paper of Edward Smith on experiments on human foods. *One bundle*

- PROD10.5** Drafts for 'Observations on the Recently Introduced Manufactured Foods for Agricultural Stock' JRAS 19, 1858, with printed advertisements for animal foods, pamphlets on animal nutrition and notes by Lawes on his use of Thorley's cattle condiment in experiments. *One bundle*
- PROD10.6** Draft 'Report of Experiments on the Fattening of Oxen at Woburn Park Farm, JRAS 22, 1861, with tables, notes and correspondence from 1849. *One bundle*
- PROD10.7** Production papers for 'On the Composition of Oxen, Sheep and Pigs and of their increase while fattening', JRAS 21, 1860. *One bundle*
- PROD10.8** Production papers for 'Supplementary Report of Experiments on the Feeding of Sheep' JRAS 23, 1862 with tables and calculations from 1848 onwards. *One box*
- PROD10.9** Production papers for JB Lawes's paper to the Royal Dublin Society 'On the Science of Feeding, as applied to the production of Meat and Manure, 1864. *One bundle*
- PROD10.10** Production papers for 'On the Sources of Fat of the Animal Body' a lecture to the British Association in Nottingham, printed in Phil. Mag. 32, 1866. *One bundle*
- PROD10.11** Notes for a lecture and production papers for 'The Formation of fat in the Animal Body', Jnl Anat and Phys. 11, 1877. *One bundle*
- PROD10.12** Printed copies of Versuche Über die Fettbildung in Theirkorper by Soxhlet, with letters, notes and tables, 1881. *One bundle*
- PROD10.13** Production papers for 'Supplement to a former paper entitled "Experimental enquiry into the Composition of Some of the Animals Fed and Slaughtered as Human Food, Phil. Trans. 174, 1883. *One bundle*
- PROD10.14** Production papers for 'The Feeding of Animals for the Production of Meat, Milk and Manure and for the Exercise of Force' JRAS 3rd series 6, 1895, with some translations of foreign works. *One bundle*
- PROD10.15** Production papers for 'The Valuation of Manures obtained by the Consumption of Foods for the Production of Milk' JRAS 3rd series 9, 1898. *One bundle*
- PROD10.16** Tables relating to sheep experiments, 1843 – 63. *One bundle*

- PROD10.17** Tables and calculations for experiments on the comparative fattening qualities of Cotswold, Hampshire, Leicester, Sussex and crossbreed sheep, 1850 – 3. *One bundle*
- PROD10.18** Tables relating to sheep grazing, 1856 – 69. *One folder*
- PROD10.19** Tables, calculations and notes on experiments to determine the feeding quality of equal weights of linseed cake, cotton cake and cotton feed, 1866. *One folder*
- PROD10.20** Tables, analyses and notes by Voelcker on sheep feeding experiments on cotton cake, maize meal and roots, 1877. *One folder*
- PROD10.21** Tables, calculations, analyses and notes on sheep feeding experiments at Whittingham, Norfolk, 1888 – 9 compared with experiments at Rothamsted in 1850 – 1. *One folder*
- PROD10.22** Tables, notes and calculations on Woburn sheep feeding experiments, 1880s – 90s, referring also to Rothamsted experiments in 1850s and 1860s, with report of Woburn experiments published in JRAS 3rd series 1895 and other printed papers. *One bundle*
- PROD10.23** Sheep killing books, 1851 – 3, 1866. *Three notebooks*
- PROD10.24** Notebooks with weights of sheep, their food, dung and urine, 1860, 61, 66. *Seven notebooks*
- PROD10.25** Tables and notes on the 2nd – 5th series of pig feeding experiments on the relationships between food consumed and live weight increase; also tables, notes draft report and letter of Lawes's on the 6th experiment, 1850, 51. *Four bundles*
- PROD10.26** Tables and notes on experiments on the relationship of nitrogenous foods and work, with a diagram of the rack in which pigs were held, 1854, 62. *Two bundles*
- PROD10.27** Miscellaneous tables on Rothamsted pigs, 1850s and undated. *One folder*
- PROD10.28** Tables and notes on experiments with adding wine and spirits to pig food. *One folder*
- PROD10.29** Pig killing books, 1850s, 1860s. *Three notebooks*
- PROD10.30** Pig feeding experiment notebooks, 1850. *Four notebooks*
- PROD10.31** Tables relating to Rothamsted bullocks, 1847 – 99. *One bundle*
- PROD10.32** JB Lawes's 'Tables for estimating dead weight and value of cattle from live weight' with advertising notice and a few letters, 1888. *One folder*

- PROD10.33** JH Gilbert's notes on dairying, including notes on the Midland Dairy Institute, Kegworth, Nottinghamshire, c1895. *One bundle*
- PROD10.34** Tables relating to the ashes of ten animals (cattle, pigs and sheep) of different descriptions, ie fat, half fat etc., 1850s, 1860s. *One bundle*
- PROD10.35** Notebooks on pig and sheep experiments and on crops and manures, mid 1850s. *Three notebooks*
- PROD10.36** Notebooks on feeding and weights of bullocks, pigs and sheep, 1860s. *Four notebooks*
- PROD10.37** Tables on the balance of food and excrement in oxen, pigs and sheep, 1876. *One folder*
- PROD10.38** Correspondence with R Stratton and C Randall on feeding and manures, c1876. *One small folder*
- PROD11 Sewage**
- PROD11.1** Commission appointed to inquire into the best mode of distributing the sewage of towns and applying it to beneficial and profitable uses: figures, newspapers, pamphlets and tables, late 1850s – mid 1860s; printed copy of second report, 1861 and draft of third report. *Two boxes; related pamphlets in Library, see Library catalogue*
- PROD11.2** Letters on the Commission's experiments in Rugby, with some draft replies from JH Gilbert, JB Lawes and Christy, 1856 – 65. *Three volumes*
- PROD11.3** Production papers for JH Gilbert's lectures on sewage at Cirencester and Hull and for JB Lawes and Gilbert's paper 'On the Composition, Value and Utilization of Town Sewage' JCS, 19, 1863 – 6. *One bundle*
- PROD11.4** Lawes's 'Remarks on the Discussion for the Paper on the Sewage of London', 1855 and copy of the Weekly Agricultural review, with an editorial on Liebig and letter on urine as manure. *One bundle*
- PROD11.5** Analysis of foodstuffs and special diets, with tables of analyses of beer (mainly) and milk supplied by named publicans in Harpenden, calculations of excrement produced by London's population and of nitrogen in food, printed returns of metropolitan water supply and other calculations of food stuffs and human excrement, c1850s, 1860s. *One bundle*
- PROD11.6** Tables of nitrogen and carbon consumption and human excrement analysis, with details of diets in workhouses, on board ship and in prison, c1850s, 1860s. *One bundle*

- PROD11.7** Tables, calculations and notes on human excrement, mid 19th century. *One bundle*
- PROD11.8** Tables, calculations and notes calculations human excrements, with Sewage Commission notes and accounts, mid 19th century. *One bundle*
- PROD11.9** Circulars, reports, tables and notes of the British Association Committee on sewage, 1868 – 76. *One bundle*
- PROD11.10** Letters to JH Gilbert, mainly telling him of meetings, with a few draft replies, 1860s, 1870s. *One bundle*
- PROD11.11** Correspondence on work of Committee, 1860s, 1870s. *One bundle*
- PROD12** **Silage**
- PROD12.1** 'Rothamsted Ensilage Experiments 1884 – 5': tables, including tables of animal weights and feed; analyses, notes and determinations, JH Gilbert's directions for silage experiments and proof copies of 'Experiments in Ensilage, conducted at Rothamsted, season 1884 – 5. *One bundle*
- PROD12.2** 'Rothamsted Ensilage and Cow and Oxen feeding experiments, material for article in Agricultural Gazette etc.': analyses, notes and tables, 1880s. *One bundle*
- PROD12.3** 'Ensilage and feeding experiments at Rothamsted, second season, 1885 – 6': analyses, notes and tables. *One bundle*
- PROD12.4** 'Rothamsted Silage and Feeding Expts: analyses, notes and tables with additional details of bullock feeding experiments, dairy herd accounts, silage temperatures, pit liquor composition and relevant printed items, 1886 – 7. *One bundle*
- PROD12.5** 'Ensilage and Dairy Experiments: correspondence, notes and tables with translations of related papers, 1882 – 9. *One bundle*
- PROD12.6** 'Bath and West of England Agricultural Society's ensilage experiments season 1885 – 6': correspondence and report on experiments at Bower Ashton near Bristol, 1883 – 6. *One bundle*
- PROD12.7** 'Hay and Ensilage Mr Edwards Dairy Experiments and Miscellaneous': analyses, notes and tables relating to experiments at St Albans Dairy and JH Gilbert's notes on silage in America, 1880s. *One bundle*
- PROD12.8** Rothamsted Ensilage Experiments 1885 – 8: analyses, notes and tables including details and sketch of silage pits. *One bundle*



ROTHAMSTED
RESEARCH

Library & Archives

RB

Documents, 1840s onwards, received from Rumball Sedgwick, early 2001

Extent and form:	Seven boxes and three large loose plans , mainly paper documents in good condition unless otherwise indicated. The plans are based on the Ordnance Survey 25" or 6" inch scales, unless otherwise indicated.
Location:	Store
Administrative history:	Created or brought together by the donors, Rumball and Sedgwick of St Albans, then given as an unconditional gift to IACR Rothamsted (now Rothamsted Research) and added to the archives administered by the Library, where it will be retained as a separate collection. A few additional items were received in 2007 – 8.
Custodial history:	Kept by the donors before being given to Rothamsted in 2001, possibly after the death of a Lawes family member.
Accruals:	Rumball Sedgwick continued to work for the Lawes Trust until 2007, so other items may come to light
Existence of copies:	None known
Related material at Rothamsted:	There is a little Lawes family material in the archives at Rothamsted that are administered by the Library. There are also some photographs of Rothamsted Manor but there are no 19 th or 20 th century records of estate management.
Related material in other repositories:	Hertfordshire Archives and Local Studies holds mediaeval and early modern records of the Rothamsted estate but there is not much material from the 18 th century onwards (D/Elw).
	Updated 6 October 2011

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

The firm known in 2009 as Rumball Sedgwick of St Albans managed the Lawes family estate, including the land now owned by the Lawes Trust. Although this archive is small, it is the main source of information on Rothamsted estate management. The Lawes family may have destroyed some of their archives when they left Rothamsted as the 19th and 20th century material in their surviving archive is limited.

Much of the collection is plans, which are a useful source for local history. It also includes some sources of personal information, eg details of properties and tenants.

- RB1** **Sir John Bennet Lawes, 1814 – 1900**
- RB1.1** Lists of tenants, rental, details of copyhold tenancies and quit rents with correspondence, sale particulars and other supporting papers, c1840 – c1920. *One large bundle*
- RB1.2** Probate copy of will of William Sears of Harpenden Common, farmer, 1846, with later notes and rent receipts. *Four items in folder*
- RB1.3** Quit rent receipts, 1850s – 60s, 1880s – 1900s. *Three small notebooks*
- RB1.4** Correspondence about a dispute over enfranchisements of copyhold properties in Harpenden, 1879 – 84. *One folder*
- RB1.5** Lease by JB Lawes to the Lawes Agricultural Trust, with a plan attached of fields and buildings concerned and with the LAT foundation deed, 1889. *Plan size 60 x 80 cm. Two in folder*
- RB1.6** Lease of Rothamsted Manor, CB Lawes to JB Lawes, 24 June 1896. *One item in folder*
- RB1.7** Harpenden Common presentments, 1895, regulations, undated, consent to telegraph poles, with attached plan showing the position of buildings near the Common, 1904, agreement with race committee, 1905. *Plan size 95 x 18 cm. One small bundle in folder*
- RB2** **Sir Charles Lawes-Wittewronge, 1843 – 1911**
- RB2.1** Lease, assignments, sale contract and supporting papers for C Lawes-Wittewronge's studio in Chelsea, 1873 – 1914, with plans showing its position between Commercial Road and Chelsea Bridge Road. *10 items in folder*
- RB2.2** Ordnance Survey 25" maps: 1st edition revised 1897 and 2nd edition, 1898, of Harpenden, Rothamsted and district, with Rothamsted properties coloured. One map has a pencil note saying '1909'; *Size: 2=2 m x 1 m 40 cm, 1=3 m x 1 m 30 cm (2=6 ft 6 ins x 4 ft 4 ins, 1=9 ft 6 ins x 4 ft). Three very large items. Copied onto CD-ROM, 2002*

One of the 1898 maps (not the one dated 1909) has a related schedule, based on OS number and listing acreage, cultivation, tenants and rents; the other includes a list of tenants and their holdings. *Copied onto CD-ROM, 2002*

- RB2.3** Description of property and tenants, 1909, with map reference numbers. *One item in folder*
- RB2.4** Sketch plan of railways through Harpenden to Bedford and Hemel Hempstead, 1905, with small areas of adjoining land coloured; detailed plan of area near railway with roads and properties named, undated. *Scale: 3.156 chains to 1 inch and 2 chains to 1 inch; size 35 x 90 cm and 35 x 135 cm. Two items in folder*
- RB2.5** Insurance policy, leases and plans for The Sycamores' near Leyton Road, Harpenden, 1906 – 26 and undated. *Plans size: 22 x 23 cm, 28 x 24 cm and 33 x 54 cm; condition: brittle. Six items in folder*
- RB2.6** Agreements to pay for the use of gateways onto the Rothamsted estate, including one with plan of land occupied by WC Sneath, with list of gateways, 1909 – 30. *Plan size: 19 x 25 cm. Seven items*
- RB2.7** Plan of St Nicholas Estate, Harpenden, 1910, prepared by S and S Salisbury of Harpenden, showing numbered plots, some buildings and names of purchasers, roads, footpaths, trees and hedges; also sketch plan of area opposite the National Schools with related letter. *Scale: 100' to 1.25"; size: 54 x 65 cm and 24 x 17 cm; condition: fragile and poorly repaired. Three items in folder*
- RB2.8** Plan of alterations to Rothamsted Lodge for C Lawes-Wittewronge, coloured, undated, with insurance policy, 1910, referring to Rothamsted Lodge 'in course of alteration', correspondence with lessee, 1917 – 23, lease, 1929, undated plan and schedule of dilapidations, 1936. *Scale of plan: 8' to 1"; size: 60 x 60 cm; condition: damaged on folds. One bundle*
- RB2.9** Leases of parts of Rothamsted Park to William Dunkley, 1911 and 1912, and to Mr Salmon, 1921. *Three items in folder*
- RB2.10** Plan of small area near Limbrick Hall, Harpenden, with title 'Plan accompanying application to Lord of the Manor of Rothamsted to A Beck Esq Steward of the Manor', undated, probably early 20th century. *Size: 40 x 42 cm. One item in folder*

- RB3** **Lady Amelie Lawes-Wittewronge, died 1928 and Sir John Lawes-Wittewronge, 1872 – 1931 (Sir Charles' widow and son).**
- RB3.1** Valuations of C Lawes-Wittewronge's property for estate duty, including London property, 1911 – 4, of silver and plate at the Westminster Bank, St Albans and of heirlooms and of furniture, linen etc at Rothamsted Manor, with notes, drafts and correspondence. *One bundle*
- RB3.2** Plan of Bowers House, Harpenden, 1911, for sale, showing Bowers House and surrounding area, buildings, roads, pond, trees and land sold to LMS Railway. *Size: 90 x 50 cm; condition: reasonable. One item in folder*
- RB3.3** Draft sale particulars of Topstreet Farm, Harpenden, 1911, with plan showing the farm and surrounding area, buildings, roads, footpaths (including a private cartway) gravel pit and trees. *Plan size: 70 x 75 cm. Four items including three copies of the plan*
- RB3.4** Insurance policies for Rothamsted estate and a little correspondence, 1912. *One small bundle*
- RB3.5** Lease of Gable End, Harpenden to JE Salisbury, 1913 and agent's instructions for conveyance of Gable End, 1925, with plans showing its position at corner of Coach Lane and Leyton Road. *Size: 45 x 37 cm and 27 x 23 cm. Three items in folder*
- RB3.6** Lease of Manor to Mr and Mrs Sidebottom: agreement to Lease, 1913; plan no. 2 referred to in lease showing Rothamsted estate; copy lease and plan of drains to outbuildings, 1926, papers on insurance, receipts and expenditure and repairs, 1913 – 30. *Estate plan: scale: 5280' to 1 mile; size: 45 x 60 cm; drains plan: no scale; size: 29 x 27 cm. One bundle*
- RB3.7** Correspondence with the LAT about use of gravel, 1912 – 5 and repairs, 1929 with extract from 1889 lease regarding access, copy lease of Home Farm to LAT, 1912 and letter of complaint from Major Sidebottom about hedges, 1932. *Eight items in folder*
- RB3.8** Correspondence about property in Harpenden used by Millwall Rubber Company, 1914 – 24. *One folder*
- RB3.9** Lady A Lawes-Wittewronge's letters to her agent on repairs to Mr Dunkley's house, sale of Topstreet land and LAT timber damage, 1913 – 4; agent's letter to Lady Amelie, 1914; agreements to work for Lady Amelie, 1924. *One folder*
- RB3.10** Allotment notices, 1917 – 33. *One bundle*
- RB3.11** Rothamsted estate survey, 1920. *One small volume*

- RB3.12** Rothamsted cottages rent book, 1922 – 6. *One small volume*
- RB3.13** Consent to telegraph posts at Hatching Green, 1924. *One item in folder*
- RB3.14** Plan number 1393 with title 'Main road from Harpenden to Redbourn' prepared by Hertfordshire County Surveyor and showing proposed road straightening, 1924; undated plans of the area north and south of the Harpenden to Redbourn Road. *Size: 35 x 1m 20 cm, 27 x 50 cm and 27 x 90 cm. Four items, two largely duplicates in folder*
- RB3.15** Harpenden UDC: plans and sections for High Street surface water sewer, 1926 and for Piggottshill Lane Improvements, undated. *Scale: 41.66' to 1"; size: 69 cm x 1m and 73 x 1m. Two items in folder*
- RB3.16** Requests for extinguishing copyhold tenancies, 1926 – 7. *One folder*
- RB3.17** Plans prepared by the North Metropolitan Electric Power Supply Company for cables along Walker's Road and to The Warren, West Common, 1927 and of the supply to Rothamsted Farm, 1931, showing lines to be taken by cables, roads and buildings, some named. *Size: 2=48 x 50 cm, 1=54 x 52 cm. One folder*
- RB3.18** Plan (ground plans and elevations) and specifications for cottages at farm, 1928. *Size: 47 x 66 cm; condition: slightly damaged. Three items*
- RB3.19** Notes on repairs at Plumb Cottage, Hatching Green, 1928. *One item in folder*
- RB3.20** Scout Farm: notes on property, 1929, correspondence on sale of land at Scout Farm for road widening, with plan, 1930 – 1 and on demolition order for unfit property, 1956, schedule of dilapidations, undated. *Plan scale 60' to 1"; size: 27 x 29 cm. One bundle*
- RB3.21** Rentals and wayleave rentals, undated, probably 1920s. *One folder*
- RB3.22** Harpenden Common: lists of tenancies, easements, wayleaves and rents, late 1920s; agreement for fair, 1932. *One folder, including duplicate items*
- RB3.23** Hertfordshire County Council scheme for alteration of county district boundaries, 1928 and Harpenden Town Planning, 1931. *Two items in folder*
- RB3.24** Plan of Hertfordshire County Council suggested sites for elementary and secondary schools between Leyton Park and

Amenbury Lane, with related letter, 1931. *Plan size 33 x 34 cm. Two items in folder*

- RB3.25** Plan of Watford and St Albans Gas Company's proposed gas main on St Albans Road and Walker's Road, Harpenden, showing the Common, roads and buildings; undated, probably about 1930. *Size: 50 x 72 cm. One item in folder*
- RB3.26** Plan on tracing paper of 'Suggested site for Harpenden C.E.School' on Grove Road indicating size of proposed buildings; undated, probably about 1930. *Size: 22 x 27 cm; condition: brittle. One item in folder*
- RB3.27** Plan of Hatching Green Farm, 1930, showing fields and buildings, undated plan of similar area with pencil note 'Sale to Jarvis' and plan showing the development of the West Common Estate, 1952. *Size: 32 x 32 cm, 60 x 44 cm and 1 m x 75 cm; condition: generally good, 1952 plan torn. Three items in folder*
- RB3.28** Plan with title 'Sale to Catton' showing land west of the LMS railway and buildings on Harpenden High Street, undated, about 1930. *Size: 24 x 24 cm. One item in folder*
- RB3.29** Plan of proposed new hard courts for Harpenden Tennis Club, undated, about 1930. *Scale: 32'=1"; size: 43 x 38 cm. One item in folder*
- RB3.30** Inventories of linen sent to Cornwall and Australia, of worn-out articles in the Manor to be disposed of locally, of worm eaten furniture suggested for removal and of other articles at Rothamsted, 1926 – 7 and c1926, inventory of Wittewronge boxes at bank, 1929, with some later notes on disposal, inventory of boxes stored in depository in St Albans, 1929, inventory of items for repair, 1929, of articles moved to depository, 1930, of articles suggested for disposal and receipt for paintings, 1931. *One bundle, including duplicate items*
- RB3.31** Account for bread from Jn Parcell, baker and confectioner, 1911 – 31. *One notebook*
- RB4** **Lady Helena Lawes-Wittewronge, died 1961 and Sir John Claude Bennet Lawes (Wittewronge) 1898 – 1979 (Sir John's widow and son).**
- RB4.1** Rothamsted estate: valuations, 1932. *One folder*
- RB4.2** Sale of land to the Lawes Agricultural Trust: draft agreements, schedules, plans, terms and valuations regarding the sale of a large part of the Rothamsted estate to the LAT, 1930 – 4, including letters on Coach Lane widening, Hatching Green right of way, Harpenden parish church north aisle upkeep, the condition of the timber and an agreement, with plans, for renting

land near the Redbourn Road to Dunkley, 1933. *Plans sizes: 30 x 30 cm to 80 x 90 cm. One bundle*

- RB4.3** Schedules of tithe rent charges, plan and notes on altered tithe apportionment, 1934, arising from sale of some Rothamsted estate land to the LAT with altered tithe apportionment and plan, 1934 (MAF LT 36168) showing land subject to altered tithe rent charge, the railway, coniferous and deciduous trees and buildings (Public Hall, The Sycamores, Heathfield Works, Red Gables, Rothamsted Lodge, Manor and Experimental Farm named). Also including a plan of the area around the Manor, with no schedule or other details, a small tracing (MAF LT 32726) of the area near the Rubber Factory at Southdown and details of JB Lawes's lands from the 1844 tithe apportionment. *Sizes 66 x 100 cm and 25 x 27 cm; condition: reasonable. One bundle*
- RB4.4** Rothamsted estate survey 1934, with plan number, holding details and rents. *Three items*
- RB4.5** Timber valuation books, notes and sale particulars, 1930s. *One bundle*
- RB4.6** Knott Wood: valuation books, lists of timber, tenders for sale and three plans showing routes to be taken by purchasers removing timber, with some notes of purchasers, 1933 – 8 (Knott Wood timber was reserved to the vendor when other land was sold to the LAT). *Plans size: 70 x 48 cm; condition: reasonable; one copied onto CR-ROM in 2002. One bundle*
- RB4.7** Plan of land for sale between Amenbury Lane, Leyton Road and Coach Lane, with plot numbers and contours, 1934. *Size: 30 x 55 cm; condition: brittle. One item in folder*
- RB4.8** Two plans with title 'St Albans RDC Planning Scheme', showing boundaries, housing densities and other proposals affecting the Lawes-Wittewronge estate, 1935, with OS 6" 1925 edition (complete sheet) with pencil note 'Harpenden Town Planning, 1931'. *Size: 1=44 x 44 cm; 1=19 x 36 cm. Three items in folder*
- RB4.9** Draft lease of grazing rights on land near Hatching Green, Harpenden to Walter Vyse, 1936, with plan. *Size: 29 x 50 cm. Two items in folder*
- RB4.10** Sale particulars of furniture, paintings, silver and other objects offered for sale by Christies in 1936; draft catalogue for sale in Harpenden, list of statuary sold to the LAT; schedule of fittings at the Manor, inventory of heirlooms and furniture in depository, lists of items returned to the depository and of items Mrs Sidebottom was willing to purchase, 1936. *One bundle*

- RB4.11** Insurance valuation of Mrs Sidebottom's property at the Manor, 1936, and probate valuation, 1939. *Two items*
- RB4.12** Draft prospectus for sale of residue of Rothamsted Estate, 1938 with statement on history of Amenbury Lane, 1935; related plans, 1934 – 49 and undated, titled 'Portion of Rothamsted Estate' showing areas for sale (near Amenbury Lane, in Rothamsted Park and at Southdown) some with notes on sales and tenants. *Plans size: 45 x 55 cm and 40 x 33 cm; condition: reasonable. One bundle*
- RB4.13** Plans of small area between Crabtree Lane and Milton Road, 1938, one with title 'Sale to Alderton'. *Scale: one based on OS 25", one 1/1000; size: 26 x 26 cm and 20 x 20 cm. Two items in folder*
- RB4.14** Catalogue, accounts, posters and notes on bids for sale of Manor contents after Mrs Sidebottom's death, 1940. *One folder*
- RB4.15** Military occupation, 1939: schedules of state and fixtures, including items in the garden, inventory of furniture and effects as taken over by military, schedule of dilapidations of furniture and effects, schedule of repairs with cleaning estimates, compensation form and plans of area let to military, showing the Manor, gardens and access roads. *Plans size: 60 x 54 cm and 36 x 39 cm; one torn at edge. One bundle*
- RB4.16** Plan prepared by the Agricultural Requisites Supply Company of position of posts on roads at Rothamsted used by the LAT, c1940. *Size: 43 x 30. One item in folder*
- RB4.17** Rentals, 1943 – 6, 1949. *Two items in folder*
- RB4.18** Plan of 'Proposed house in Amenbury Lane, Harpenden for R Gingell, Esq' mainly showing proposed road widening, 1949. *Scale: 1/5000; size: 34 x 46 cm. One item in folder*
- RB4.19** Plans, evidence, correspondence and other supporting papers relating to Helena, Lady Lawes-Wittewronge's objections to the Hertfordshire Development Plan, 1953. The largest plan shows the land referred to in the statement of the objectors' case (Amenbury Lane tennis court, Paddock Lane, Hatching Green paddock, land and woodland on the north side of Harpenden Lane, woodland near Harpenden Lane, agricultural land near Harpenden Lane and land at Rothamsted to be dealt with separately). It also shows the boundaries of land sold to the LAT and agricultural land designated for development. *Size: 48 x 44 cm. There are also three related preparatory plans and three showing services (water etc, to disputed properties). Size: 31 x 28 cm; condition: reasonable. One bundle*

- RB4.20** *number not used*
- RB4.21** Rumballs' accounts on behalf of the Lawes family to be remitted to the Public Trustee: general, 1931 – 62; house, 1931 – 6; estate, 1960 – 2; Harpenden Common Preservation, 1931 – 5. *One volume, continuing an unidentified earlier volume*
- RB4.22** Miscellaneous notes and letters on estate management, late 1950s. *One large bundle, received from Rumballs in 2008 in a damaged ring binder, and probably a survivor from a series of similar letters and binders.*
- RB5** **Unclassified plans** (*all in a single folder*)
- RB5.1** 'Rothamsted': small plan of Manor buildings with unidentified red line, possibly cable or gas main, undated. *Size: 14 x 14 cm. One item*
- RB5.2** Sketch plan endorsed 'Rothamsted alteration of footpath' and Rothamsted Manor' undated. *Size: 38 x 56 cm; condition: poor. One item*
- RB5.3** National Telephone Co. Ltd: proposed pole near Rothamsted Avenue, undated. *Size: 17 x 22 cm. One item*
- RB5.4** Part of the road between Harpenden High Street and Crabtree Lane, showing proposed road widening, undated. *Size: 27 x 52 cm; condition good. Two items*
- RB5.5** Plan of the Bowling Alley and surrounding area (Southdown) showing the lines of sewers, undated. *Size 32 x 38 cm. One item*
- RB5.6** Plan of area near Piggottshill Lane with title 'Harpenden UDC plan referred to', undated. *Size 31 x 18 cm. One item*
- RB6** **Miscellaneous**
- RB6.1** 'List of plans and papers relating to the Manor of Rothamsted', including some of the documents listed above, plus others not received by Rothamsted, undated, after 1952. *One item, received from Rumballs in 2008.*



ROTHAMSTED
RESEARCH

Library & Archives

RUS

Sir (Edward) John Russell At Rothamsted 1907 – 43, Director 1912 – 43

Extent and form:	37 boxes, 44 volumes of diaries and 22 large volumes of photographs. Condition variable
Location:	Annexe
Administrative history:	Mainly created by EJ Russell before and during his time at Rothamsted
Custodial history:	Part brought together and stored in the annex before 1984; part found in the Manor, late 1990s; some items found elsewhere at Rothamsted and transferred to the Library archives from 1984 onwards
Accruals:	Minor accruals possible if found at Rothamsted; acquisition of material from outside Rothamsted unlikely
Existence of copies:	Recipients' copies of correspondence may survive in their own archives; there may also be duplicate copies of photographs in other archives or private collections
Related material at Rothamsted:	None known
Related material in other repositories:	Printed works in Rothamsted library. Correspondence and other papers in Reading University Library, see list in Librarian's office; Photographs (copies at Rothamsted) at Sheffield University, see cds and correspondence in archivist's 'archives elsewhere' file. No other manuscripts known but probably exist
	Updated 6 October 2011

Access and Copyright:**Contact the Librarian:**

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

EJ Russell worked at Rothamsted for nearly 40 years, over 30 of them as Director. His archive is one of the most extensive in the Rothamsted archive and although it includes notebooks on his scientific work before and at Rothamsted, most of it is administrative material relating to his work as Director and on behalf of both Rothamsted and the government.

The Director's papers include correspondence (largely unsorted), administrative papers about war service, new buildings, buying the Rothamsted estate and other matters; the official papers relate to his service on committees. Russell also travelled widely, visiting research stations and universities and speaking on scientific agricultural matters; these visits produced a series of diaries and photograph albums.

Russell had an ambition to make Rothamsted a centre for the study of the history of agriculture. Most of the documents he collected for this are no longer at Rothamsted but the library still has the books and prints.

- RUS1** **Pre-Rothamsted and personal**
- RUS1.1** Notebooks relating to EJ Russell's scientific work before coming to Rothamsted, late 19th and early 20th centuries. *19 notebooks in one box*
- RUS1.2** Notebooks relating to EJ Russell's scientific work at Rothamsted, 1913–9. *17 notebooks and one folder in two boxes*
- RUS1.3** Certificates and diplomas from the *Exposition Internationale de Centenaire de Pasteur*, Strasbourg, 1923; the British Empire exhibition, 1924; the University of Berlin, 1935 and the Polish Academy of Sciences, 1959. *Five items, four boxed; one stored with JBL2.7 under stairs in Annexe*
- RUS1.4** Portrait etching by CH Barraud, 1938. *Framed, stored under stairs in Annexe*
- RUS2** **Director's correspondence, c1910 – 1940s.**
These bundles were in the Manor Library where they had been for an unknown length of time. They contain mainly correspondence and reflect Russell's wide ranging work promoting British agricultural science. They are not in archive quality packaging.
- RUS2.1** Notes and figures on 'crops other than wheat etc, c1910 – early 1920s'. *Five folders in one bundle*
Notes and figures on 'rotation experiments, early 20th century'. *15 folders in one bundle*
- RUS2.2** 'Early notes on fertilizers, early 20th century'. *12 folders in one bundle*

- RUS2.3** Correspondence on the Library 1915 – 6, 1926; working conditions 1916 – 7; the Agricultural Education Association, 1916 – 7, 1922 – 3; wart disease 1920 – 1; with Lord Bledisloe 1925; with committees, government departments and societies 1926; on conferences, 1926, on experiments, 1926. *Eight bundles*
- RUS2.4** General correspondence, correspondence on building extensions and on publications, 1926; correspondence on appointments and enquiries, 1927. *Five bundles*
- RUS2.5** Correspondence on the Library, visitors and visits to America and Palestine, 1927; on committees, conferences, experiments and the Library, 1928 – 9. *Seven bundles*
- RUS2.6** Correspondence on appointments, committees and societies, building extensions, the Farm, general administrative matters, general enquiries, lectures, the Library, staff, visitors, visits and Woburn, 1930 – 1. *12 bundles*
- RUS2.7** Correspondence on appointments, scholarships and testimonials, committees, building extensions, the Farm, general matters and general enquiries, 1930 – 1. *Six bundles*
- RUS2.8** Correspondence on lectures and BBC talks, the Library, overseas contacts, staff and Woburn, 1932. *Five bundles*
- RUS2.9** Correspondence on appointments, scholarships and testimonials, committees, experiments, building extensions, and the Farm, 1933. *Five bundles*
- RUS2.10** Correspondence on general enquiries, the Library, overseas contacts, publications, visitors, visits, voluntary workers and Woburn, 1933. *Nine bundles*
- RUS2.11, RUS2.12** Letters from rural schoolchildren, 1933. *Two boxes*
- RUS2.13** Correspondence on committees, government departments and societies, experiments at Cheshunt, Hertfordshire, general matters and general enquiries, 1934 – 5. *Five bundles*
- RUS2.14** Correspondence on experiments, building extensions, general enquiries, the Farm, lectures and the Library, 1934 – 5. *Six bundles*
- RUS2.15** Correspondence on Woburn and voluntary workers, 1934 – 5, on appointments, scholarships and testimonials and on committees, government departments and societies, 1936 – 8. *Four bundles*

- RUS2.16** Correspondence on experiments, building extensions and general matters, 1936– 8. *Three bundles*
- RUS2.17** Correspondence on general enquiries, 1936 – 8 and on appointments, scholarships and testimonials, 1939 – 43. *Three bundles*
- RUS2.18** Correspondence on Rothamsted centenary and on committees, 1939 –43. *Three bundles*
- RUS2.19** Correspondence on enquiries about crops and food, fertilizers, the soil and miscellaneous, 1939 – 43. *Four bundles*
- RUS2.20** Correspondence on experiments, 1939 – 43. *Two bundles*
- RUS2.21** Correspondence on extensions, general matters, the farm, the library and Woburn, 1939 – 43, on school and farm centres, 1942 – 4 and on preparation and sale of engravings of Lawes and Gilbert by Julia Clutterbuck (Mrs Alsop) 1924 – 41, with letters from Miss A Gilbert on pictures of JH Gilbert. *Seven bundles, engravings and plates under stairs in Annexe*
- RUS2.22** Correspondence on refugees, early 1940s. *One box; the contents of box RUS 2.22 had been roughly arranged in alphabetical order sometime before it was brought to the Archives. The following details are taken from what has been written on each letter or group of letters.*
 Abel, Prof Dr Emil; Audor, Stephen (also refers to Balcerek and Klaus); Balcerek, Wincenty; Beer, Hanna; Berkowitz, N; Bier, Mrs; Blass, RG; Bondy-Charvát, Captain RO; Burslik, Dr Margaret ; Czechs at Redbourn (Beer, Klaus, Weiss); Czechs: Miklos and others; Dmochowski; Dukes; Filewicz and Modlibowska; Gruensfeld, Dr M; Guttman, Miss Steffi; Havas, Dr and Mrs; Hecht, Dr; Hochfeld, Arnold; Jakubiec, Michal; Jalowiecki, Major Michael; Kassanis, Basil;Kende, Andrew; Klaus, Jan; Kleczkowski, Dr and Mrs; Slizynski, Dr BM; Snieszko, Professor; Landau, Neville; Laurentzsch, Mr and Mrs Kurt; Michlstaedter, Dr Elias; Murpurgo, Peter and Paul; Ossowski, Dr Leon; Rabl, Miss Edith; Rodriguex-Merina, Francisco; Rothschild, Dr Eva; Rozsynai, Mr Desider; Ruczkowaki, Stanislaw; Schmidt, Gerhard; Schultze, Hans; Spitzer, Peter; Spiwak, HJ; Steinbrecher, Dr; Steuer, Mr and Mrs; Schlesinger, Miss Ilse; Strzemienski, Dr E; Van Baslen, A; Wagner, Mr and Mrs Karol; Wasowicz and Balcerek; Weiss, Dr Victor; Wiesenthal, Dr Uszer; extensions to curfew (Aguirre, Boyanoff, Cunow, Kalmus, Kleczkowski, Morpurgo, Olbrycht, Ripp); general: Balcerek, Klaus, Wagner; Polish students: A and J Kleczkowski, R Sibliger.

RUS2.23 One bundle of correspondence from 1933 retained in the condition it was found.

RUS3 Diaries, photographs and large photograph albums, 1912, 1920s – 50s

All the items listed below are one volume unless otherwise stated; the whereabouts of photograph albums I, VII and XXIV is not known in 2011.

Canada and the United States, 1912 and 1924

Canada, 1924. *Two volumes*

United States, 1924. *Two volumes*

Sudan, 1923 – 4

Overseas conferences, 1923 – 9

Palestine, 1927, 28. *Two volumes* (with photograph album II)

United States, 1927

Australia, 1928 (with photograph albums III and IV)

New Zealand, 1928 (with photograph albums III and IV)

South Africa, 1929 (with photograph album V)

Denmark, 1930 (with photograph album VI)

Poland and Russia, 1930 (with photograph album VI)

Russia 1930, (Soil Science Congress)

Canada, 1933

Russia, 1934 (with photograph album XI)

Northern France, 1934 (with photograph album VIII)

Italy, 1935 (with photograph album VIII)

Portugal, 1935 (with photograph album X)

Poland, 1936 (with photograph albums XII and XIII)

Niklewsky: Agriculture of Poland

Indian diaries, pamphlets and reports, 1936 – 7. *Seven volumes* (with photograph albums XIV to XIX)

Dutch and French diaries, 1937 (with photograph album XI)

Russia, 1937 (with photograph album XX)

Poland, 1938 (with photograph album XXI)

Australia, 1938 – 9. *Two volumes* (with photograph albums XXII and XXIII)

Italy and Libya, 1939 (with photograph album VIII)

Russia, 1939 (with photograph album XXV)

Spain and Portugal, 1943

Poland, Austria, Sweden, Holland, Eire, S and E England, 1948 – 50

East Africa, Pakistan, Sudan, 1950 – 1

New Zealand, 1929 (photograph album given by the Cawthron Institute)

Photographs from Canada and the USA, 1924 and Australia

1949; photographs of Russell at various meetings including

British Association agricultural section 1922

British Association at Transvaal University College, South Africa, 1929 (identified)

Farmer's Club visit to Wye, 1917

Geographical Association meeting, Hull 1929
 Group at Rothamsted 1932 (identified)
 Group at Rothamsted, undated, probably 1930s
 Imperial Agricultural Research Conference 1927 (roll, identified)
 International Fertilizer Conference, Rome 1938 (identified)
 International Society of Soil Science, soil microbiology 1935 (roll, identified)
 Scientific Society, University of Wales Aberystwyth, 1918 – 9 (identified)
 Society of Economic Biologists, Reading 1921 (two photographs, one identified)
All in one box

- RUS4** **Director's administrative papers**
- RUS4.1** Letters and some draft replies from staff members including staff on active service, 1914 – 8. *One large bundle*
- RUS4.2** Letters on administrative matters, including changes resulting from the war and plans for new laboratories, with some draft replies, 1914 – 9. *One bundle*
- RUS4.3** Letters on exemptions from military service, 1915 – 9. *One bundle*
- RUS4.4** Letters on administrative matters, 1915. *One bundle*
- RUS4.5** Correspondence, designers' catalogues and photographs, c 1920, relating to the war memorial tablet to KR Lewin and CH Martin, staff members killed in action. *One file*
- RUS4.6** Letters, notes and diagrams relating to cotton yields on the Tayiba and Barakat estates in the Sudan, 1911 – 4. *One box*
- RUS4.7** Papers relating to the Lawes and Gilbert Centenary Fund, including subscribers' lists, circulars, newspaper cuttings, accounts, correspondence and minutes, 1913 – 9. *One box*
The Fund was established to build new laboratories to commemorate the births of JB Lawes and JH Gilbert.
- RUS4.8** Vouchers for expenses incurred in experiments extracting ammonia from peat, 1916. *One small bundle*
- RUS4.9** Letters and reports on possible use of human and animal sewage from army camps as manure, 1916 – 9. *One folder*
- RUS4.10** Letters and reports on the testing and supply of potash fertiliser, 1917. *One folder*
- RUS4.11** Letters and reports on possible use of blast furnace dust as potash fertiliser, 1917. *One folder*

- RUS4.12** Letters on use of manufacturers' waste as fertiliser, 1917, 1918. *One folder*
- RUS4.13** Letters and reports on the use of bracken, wood ash and wool washings for potash fertiliser, 1917 – 8. *One folder*
- RUS4.14** Letters, papers and reports on EJ Russell's work for the National Salvage Council on the disposal of waste explosives, 1917 – 9. *One folder*
- RUS4.15** Rothamsted Farm Advisory Committee: letters, notes and report, 1924. *One folder*
- RUS4.16** Joint ARC and MAF Committee to review the work and finances of RES: report, Director's (EJ Russell) memo and related letters (EJ Russell and WG Ogg), 1942 – 4; summary by R Plumb, 2003. *One folder*
- RUS4.17** Evidence by EJ Russell and others to the Royal Commission on Agriculture, with papers of the Technical Committee, Costings Committee and Empire Cotton Growing Committee, 1918 – 21. *One folder*
- RUS4.18** Circular on patenting scientific inventions, with related correspondence and staff comments, 1921 – 2. *One folder*
- RUS4.19** Printed circulars setting out arrangements for visiting parties to Rothamsted and Woburn, 1923 – 5. *One folder*
- RUS4.20** Accounts and letters for running Leadon Court farm, Herefordshire, 1922 – 6. *One small bundle*
- RUS4.21** Press notices about purchase of Red Gables and appointment of Lord Bledisloe as LAT chairman, 1920 – 1. *One folder*
- RUS4.22** Reports of work carried out at Rothamsted for the Water Pollution Research Board, largely on milk and sugar effluents, 1928 – 38. *One box*
- RUS4.23** General correspondence on purchasing land at Rothamsted from the Lawes estate, including correspondence with solicitors, agents, valuers, newspapers, possible contributors and other interested parties, with plans of possible development of the area, 1932 – 5. *One bundle*
- RUS4.24** Valuation of property held on lease from the Lawes family and of possible future purchases, 1932 and correspondence, mainly with surveyors, 1932 – 4. *One folder*

- RUS4.25** Correspondence with banks, subscribers' list and statement of accounts, 1933 – 4. *One folder*
- RUS4.26** Correspondence about Sir R McDougall's gift to the appeal, with life insurance policy, 1934. *One folder*
- RUS4.27** Circulars and subscribers' lists, 1934. *One folder*
- RUS4.28** Newspaper cuttings, 1934. *One bundle*
- RUS4.29** Correspondence about the possible purchase of more land between Rothamsted estate and Harpenden, part of Rothamsted Park, 1934 – 7. *One bundle*
- RUS4.30** Correspondence with the Royal Asiatic Society about a sundial, with photograph, 1935; news paper photograph of installation at Rothamsted , undated . *Five items*
- RUS4.31** Reports of the sub-committee on record storage at Rothamsted and Woburn, c1935. *One folder*
- RUS4.32** Location list of records in the Sample House, file cabinets and compartments; list of library files, early – mid 20th century. *One bundle*
- RUS4.33** Correspondence, reports and papers on EJ Russell's membership of the wartime committee for investigating damaging German crops by weeds or chemicals, 1940 – 4. *Four files, one envelope, tied together*
- RUS4.34** Dates, speakers and titles of colloquium meetings, 1921 – 74. *One exercise book*
- RUS4.35** Programme, photographs and circulars for the Rothamsted centenary, 1943. *One bundle*
- RUS4.36** Letters about the future of the International Society of Soil Sciences, 1944 – 5. Two letters from EJ Russell as ISSS President, regarding Professor Prianishnikov of Romania, 1930, printed in *Stiinta Solului XXXV, 2, 2002*. *One bundle*
- RUS4.37** Programme of work, 1935 – 6. *One item*
- RUS4.38** Speeches at a dinner for EJ Russell on his 80th birthday, 1952. *One folder*
- RUS4.39** Allotments: correspondence of Rothamsted staff with Allotment Club secretary, Harpenden UDC and other interested parties on administrative matters, including the legal status of the allotments, occupancy, rents and moving their position to allow

for building development, with newspaper cutting, 1920s – 60s.
One bundle

RUS4.40 Photographs of farming and tea growing in Kenya, supplied to EJ Russell for a lecture by Kenya Department of Information and Brooke Bond East Africa Limited, 1957. *One folder*



ROTHAMSTED
RESEARCH

Library & Archives

RWJ

Robert Warington, junior, 1838 – 1907, at Rothamsted and JB Lawes' London factories, mid – late 19th century

Extent and form:	Three boxes, six volumes, condition reasonable
Location:	Annexe
Administrative history:	Created during working life at Rothamsted, in London and elsewhere
Custodial history:	In annexe strongroom by 1984; previously either stored at Rothamsted or with Warington family.
Accruals:	Unlikely
Existence of copies:	None known
Related material at Rothamsted:	See RWS and CHEM
Related material in other repositories:	None known
	Updated 6 October 2011

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

Robert Warington junior was employed at Lawes' tartaric and citric acid factory at Millwall and came to Rothamsted briefly in the 1850s and again in 1876. To avoid difficulties with Gilbert, Lawes employed Warington as his personal assistant and he carried out work in chemistry and microbiology. He and Gilbert found it difficult to work together and Warington left in 1890; their dispute is described in detail in *John Lawes of Rothamsted* by GV Dyke.

Warington's daughter Katherine was employed in the Botany Department in the mid-20th century. His father, Robert Warington senior, had helped Lawes with his patent suit, so in all three generations of the family were connected with Rothamsted.

The archives below illustrate both Warington's scientific work and his interest in social matters.

RWJ1 Personal and working papers

RWJ1.1 – 9 Notebooks on work at Rothamsted, 1859 – 80s. *Nine exercise books*

RWJ1.10 Tables relating to experiments with note 'for Mr Warington 1865'; notes on ash analysis, 1860s, and for experiments at South Kensington on nitrogen determination. *One bundle*

RWJ1.11 – 13 Notes on analyses, experiments and teaching, late 1860s. *Three volumes*

RWJ1.14, 15 Notes on work in JB Lawes' factories, 1867 – 72. *Two volumes*

RWJ1.16 Commonplace book with meteorological notes, Italian exercises etc c1868, with references to balances on pages 43 and 55. Not identified, possibly by Warington. *One notebook*

RWJ1.17 Autobiographical notes by Robert Warington junior, plus biographical notes on his father, late 19th century. *One folder*

RWJ1.18 Notes on work in progress, with tables, diagrams and a few letters, 1880s, 1890s. *One bundle*

RWJ1.19 Drafts for an album of letters and papers about the formation and early history of the Chemical Society, with loose circulars on an unsuccessful attempt to establish a chemists' benevolent fund, early 1890s. *One exercise book*

RWJ1.20 Lecture notes including notes for talks on capital and labour, strikes and monopolies, 'What should we teach?' and 'The Education Question' 1893 – 1904. *Four items*

RWJ1.21 List of printed works on nitrogen assimilation and notes for talk, 19th and early 20th centuries. *One volume*

- RWJ2** **Correspondence**
- RWJ2.1** Letters and some draft replies on Warington's appointment as a volunteer worker at Rothamsted, his work at the Royal Agricultural College, his appointment to Rothamsted and his subsequent work and writing, late 1850s, 1860s. *One bundle*
- RWJ2.2** Letters and some draft replies from R Warington to JH Gilbert and to his secretary Mr Gifkins, on his work and position at Rothamsted and the Royal Agricultural College, 1850s, 1860s. *One bundle*
- RWJ2.3** Letters, mainly from JB Lawes, with some draft replies, on R Warington's work and writing, his position at Rothamsted and his relations with JH Gilbert, 1870s. *One bundle*
- RWJ2.4** Letters from various correspondents, mainly on work in progress, 1870s – 90s. *One bundle*
- RWJ2.5** Correspondence with Grosjean on work on tartaric acid, 1875 – 82. *One bundle*
- RWJ2.6** Letters, mainly from JB Lawes, with some draft replies, on Warington's work and writing and his relations with JH Gilbert, 1880s, 1890s. *One bundle*
- RWJ2.7** Letters, mainly from JB Lawes and the LAT on R Warington leaving Rothamsted and on his future, 1890s, 1900s. *One bundle*
- RWJ2.8** Statement by Voelcker to EJ Russell with his view of R Warington leaving Rothamsted, 1928. *One item*
- RWJ2.9,10** Letter books with letters on all aspects of R Warington's work, including church and social work and personal matters, 1885 – 1906. *Two volumes*
- RWJ2.11 – 13** Letters received by R Warington on all aspects of his work, including church and social work and personal matters, 1885 – 1906. *Three volumes*



ROTHAMSTED
RESEARCH

Library & Archives

RWS

Robert Warington senior 1807 – 67, chemist

Extent and form:	One box, mainly paper items in reasonable condition
Location:	Annexe
Administrative history:	Created by Robert Warington senior
Custodial history:	Presented to Rothamsted by Mrs Robert Warington, junior, in April 1916, stored at Rothamsted, in annexe strongroom by 1984
Accruals:	Unlikely
Existence of copies:	Two documents are reproduced in 'The Warington-Gosse aquarium controversy: two unrecorded letters' by WH Brock in <i>Archives of Natural History</i> (1991) 18 (2): 179 – 183
Related material at Rothamsted:	See RWJ
Related material in other repositories:	Probably in the Society of Apothecaries archives and possibly in the archives of other bodies with which Warington was involved
Updated 22 January 2011	

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

These papers of Robert Warington senior do not concern work at Rothamsted but were included in the archives of his son Robert, who worked at Rothamsted from 1876 – 90.

The information below is from the outside of the bundles and the contents have not been examined in detail. However, the titles show the range of Warington senior's work

- RWS1** 'Miscellaneous letters' to R Warington as secretary of the Chemical Society and the Mathematical Society, mainly from overseas and about current work. *One bundle*
- RWS2** Notes and correspondence labelled 'Aquarium' 'Cavendish Society' 'Cornish mining' 'cotton fibre' 'dyeing' 'geology' 'lithography' 'mortar' 'native alum' 'peat water' 'red glass and glass' 'tea and other adulterations' 'sea weeds'. *One bundle*
- RWS3** Notes, letters and papers including chemical tables, brief business letters to JH Gilbert, notice of award of a testimonial by the Chemical Society, reports of analysis of the waters of the River Lea and of other analysis and experimental work, c1840 – mid 1860s. *One bundle*



ROTHAMSTED
RESEARCH

Library & Archives

SERE

Society for Extending the Rothamsted Experiments, 1904 – 56

Extent and form:	Two boxes, mainly paper items in reasonable condition
Location:	Annexe
Administrative history:	Created at Rothamsted
Custodial history:	In annexe strongroom before 1984
Accruals:	Unlikely
Existence of copies:	None known
Related material at Rothamsted:	None known
Related material in other repositories:	None known
Updated 6 October 2011	

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

The Society for Extending the Rothamsted Experiments was founded to raise funds during AD Hall's directorship and the financial help it provided contributed to the post Lawes and Gilbert expansion of Rothamsted in the early 20th century. It also helped with the purchase of the Rothamsted estate in 1934 and with jubilee celebrations in 1943. Its archive is a comprehensive record of its work

- SERE1** Appeals and correspondence on establishing the Society for Extending the Rothamsted Experiments, 1904. *One bundle*
- SERE2** Society for Extending the Rothamsted Experiments (the Incorporated Society for Extending the Rothamsted Experiments in Agricultural Science from 1909): minutes, 1904 – 56. *One volume*
- SERE3** Correspondence and notes on the incorporation of the Society, 1908 – 10. *One bundle*
- SERE4** Memorandum of Association of the Incorporated Society for Extending the Rothamsted Experiments in Agricultural Science, 1909 and related papers, 1910 – 3. *One bundle*
- SERE5** Letters to subscribers, meeting arrangements and notes, 1912 – 6. *One large bundle*
- SERE6.1 – 4** Accounts and subscribers' lists, 1904 – 47. *Four volumes*
- SERE7.1, 2** Ledgers, 1904 – 26, 1937 – 40. *Two volumes*



ROTHAMSTED
RESEARCH

Library & Archives

SITE

SITE, 19th – 21st centuries

Extent and form:	Eleven archive boxes, one other box, four rolls, some including more than one item. Condition generally good.
Location:	Store
Administrative history:	Created in the course of work at Rothamsted
Custodial history:	19 th and some early 20 th century items in Archives before 1984; later items found throughout Rothamsted but not transferred systematically
Accruals:	Probably but not routinely
Existence of copies:	Probably, of late 20 th and 21 st century items
Related material at Rothamsted:	None known but likely
Related material in other repositories:	None known
	Updated 15 August 2012

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

The site plans and related papers below are not a complete record of building development at Rothamsted. Many of them date from EJ Russell's directorship, 1912 – 43, which was period of expansion.

- SITE1 Buildings and development**
- SITE1.1 pre-1910**
- SITE1.1.1** Sample House: shelving plans, 1896 and plans for conversion to Library Annexe, 1930s, 1950s. *Three folders, tied as one*
- SITE1.1.2** Testimonial Laboratory: plans and costings for proposed alterations, 1902 – 3. *One folder*
- SITE1.2 1911 – 20**
- SITE1.2.1** Proposed railway siding in West Barnfield: correspondence, 1912. *One folder*
- SITE1.2.2** New farm buildings: correspondence, estimates, financial papers, plans, specifications and miscellaneous papers, 1912 – 4. *Two folders, tied as one*
- SITE1.2.3** Capital grant: correspondence, farm and laboratory vouchers, 1911 – 14; supplementary grant: correspondence, farm and laboratory vouchers including vouchers for new farm buildings and new north wing, 1914; capital grant for building new laboratories: accounts, correspondence, itemized expenditure lists and specification of works, 1914 – 17; new laboratory buildings (Russell Building) correspondence, estimates, financial papers, plans, specifications and miscellaneous papers, c1914 – 1920s. *Three boxes, partly unsorted*
- SITE1.2.4** North (Plant Pathology) Building: plans, 1920s, of this and other proposed developments, including designs for the forecourt, the staff garden and the water cistern in the staff garden. *One folder, plus rolled plans stored separately*
- SITE1.2.5** Director's House: plans for proposed alterations and development, 1920s. *One folder*
- SITE1.3 1921 – 30**
- SITE1.3.1** Red Gables: plans for proposed alterations and development as an administrative block, 1920s – 30s; photograph, mid 20th century. *One folder*
- SITE1.3.2** Grounds: plans for development of new laboratories forecourt, 1920s. *One folder, plus rolled plans stored separately*
- SITE1.4 1931 – 40**

- +SITE1.4.1** General plans and estimates, including the staff garden, 1930s. *One folder, plus rolled plans stored separately*
- SITE1.4.2** Programme for opening of new farm buildings, 1932, with an undated description new developments and a possibly unrelated summary of conditions on the farm and fields. *One folder*
- SITE1.4.3** Photographs and correspondence on Knott woodland clearing and reclamation, 1935 – 43, and on possible purchase of adjoining land. *Three folders and one bundle of photographs*
- SITE1.4.4** Fossils collected in West Barnfield, 1920s, presented to Rothamsted in 1931, with accompanying notes. *One box, not archive quality*
- SITE1.5** **1941 – 50**
- SITE1.5.1** Wind tunnel: plans, specifications, reports and correspondence, 1940s – 70s. *One box*
- SITE1.5.2** Statistics department accommodation in Rivers Lodge and the South/Statistics (later the Fisher) Building, 1940s – 60s: correspondence, notes, reports and plans, including plans of complete site. *One box*
- SITE1.6** **1951 – 60**
- SITE1.6.1** Plans and related papers on development and use of the North Building, 1946 – 1965. The building was occupied at different times by the Plant Pathology Institute (Entomology, Mycology and, later Pedology and Virology.. *Four folders*
- SITE1.6.2** Plans and related papers for central sterilization and storage of soil, 1959 – 62. *One folder*
- SITE1.7** **1961 – 70**
- SITE1.7.1** Correspondence and shade charts relating to the redecoration of the Russell Building, 1960s to 1980s. *One folder*
- SITE1.8** **1971 – 80**
- SITE1.8.1** Plans for new insectaries, glasshouse and ancillary building, 1972. *Two copies in one folder*
- SITE1.8.2** Plans for extensions to Statistics (Fisher) Building, 1973 – 5. *One roll*
- SITE1.8.3** Proposed central area redevelopment, 1976. *One plan*
- SITE1.8.4** Minutes of a meeting on fire damage to the Ogg Building, 1978. *One document*

- SITE1.9 1981 – 90**
- SITE1.9.1** Library annex: plans of heating installations, 1981. *One roll, stored separately*
- SITE1.9.2** Plan of Entomology wormery on the Ninnings site. *One plan*
- SITE1.9.3** Site plan 1983, amended 1985. *One document*
- SITE1.9.4** List of donors to Conference Hall, late 1980s. *One folder*
- SITE1.10 1991 – 2000**
- SITE 1.10.1** Development Plan, Issue 4, 1996. *One comb binder*
- SITE1.10.2** New laboratories: site master planning and new laboratory building reports C and D, 2000. *Two comb binders*
- SITE.1.10.3** Glasshouse redevelopment 1993: plans, including plans of complete site, and related notes. *One folder*
- SITE.1.10.4** Letters on planning permission for West Common development, 1992. *One folder*
- SITE1.11 2001 – 10**
- SITE1.11.1** Plan of new sample archive and related notes, 2006. *One document.*
- SITE1.11.2** Draft plan for alterations to the Bawden Building basement, undated. *One document.*
- SITE1.12 2011 – 20**
Nothing in Archives for 2011 onwards
- SITE2 Sales and development**
- SITE2.1** MAFF Plant Pathology Laboratory site: original and revised sales brochures and comments by Roger Plumb on the Hatching Green development of Bryant Homes by Taylor Woodrow 2006 – 7. *Two pamphlets, one loose paper*
- SITE2.2** Southwood Court: brochure explaining the history, 2007. *One pamphlet*
- SITE3 Archaeological**
- SITE3.1** **Roman site**
Reports, plans and letters, including letters on transfer of excavated material to St Alban's Museum, 1914 – 2003. *One folder*
- SITE4 Guides and histories**

SITE4.1 Journal articles on Rothamsted history and guides to the site and buildings, late 20th, early 21st centuries. *One folder*



ROTHAMSTED
RESEARCH

Library & Archives

SOIL

Soils, 1980s

Extent and form:	17 boxes. The information on the contents is taken from the boxes in which these papers were transferred to the archives and was provided by Sarah Dunham.
Location:	Store
Administrative history:	Created in the course of work at Rothamsted.
Custodial history:	Stored at Rothamsted and transferred to the archives by Steve McGrath and Sarah Dunham in 2003.
Accruals:	Possible.
Existence of copies:	None known
Related material at Rothamsted:	Contact Steve McGrath regarding this and any other enquiries about soils archives.
Related material in other repositories:	None known
	Updated 26 October 2011

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

The documents below are only a small part of work on soils at Rothamsted.

- SOIL1** **Staff**
SOIL1.1 Production papers for work by S McGrath and others, 1980s, early 1990s. *Three boxes, all with contents lists*
- SOIL2** **National Soils Inventory/NSI**
SOIL2.1 Aqua regia/AR files. *Two boxes*
SOIL2.2 Computer data. *Two boxes*
SOIL2.3 Computer print-outs. *Two boxes*
SOIL2.4 CD data. *Two boxes*
SOIL2.5 CD and CD results, box numbers, batch details, method development. *One box*
SOIL2.6 Data 1 – 93. *Two boxes*
SOIL2.7 Grid references, laboratory numbers, key. *One box*
SOIL2.8 ICP data. *One box*
SOIL2.9 Miscellaneous maps etc. *One box*
- SOIL 3** **Administration**
SOIL3.1 Laboratory Manual of the Soil Microbial Biomass Group, 2004. *One pamphlet*



ROTHAMSTED
RESEARCH

Library & Archives

ST

Saxmundham and Tunstall, early 19th century onwards

Extent and form:	Nine boxes of papers in reasonable condition
Administrative history:	Brought to the archives by M Hewitt in March 1998 and by Paul Poulton in 1999.
Custodial history:	At Saxmundham before transfer to Rothamsted
Accruals:	Unlikely
Existence of copies:	Possibly of printed reports and other pamphlets
Related material at Rothamsted:	See CHEM and MET
Related material in other repositories:	None known
	<small>Updated 21 December 2011</small>

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

Experiments on the problems of poor light land were begun by East Suffolk County Council in 1926 and were later continued by Fisons of Ipswich and Rothamsted. Experiments on the effects of fertilizers on soils were started in Saxmundham in 1899 under the Suffolk Education Committee. Saxmundham management was transferred to Broom's Barn Experimental Station under Dr R Hull in April 1964. Part of the 1999 deposit came from W Blacker, former Suffolk District Advisory Officer, following an anniversary display at Saxmundham in 1999. Mr Blacker asked for a note to be added to this list saying the first foreman at Saxmundham, Mr Charles Cattermole, was awarded the RASE long service award and that he 'served the Station and Mr Oldershaw with great loyalty'.

These archives were collected by and refer to AW Oldershaw, Agricultural Organiser in East Suffolk, 1911 – 47, PJO Trist, County Advisory Officer, National Agricultural Advisory Service, 1947 -?; Raymond Hull of Broom's Barn Experimental Station, V Woolnough of Saxmundham, G Bennett and G Cooke of Rothamsted.

- ST1 Tunstall**
- ST1.1** Reports, 1926 – 53, excluding 1940, some duplicates. *One bundle*
- ST1.2** 'Liming proposals', 1938. *One folder*
- ST1.3** Report on linseed experiments at Tunstall, 1948 – 50. *One document in folder*
- ST1.4** AW Oldershaw's book of correspondence, figures, newscuttings, notes, reports etc, 1930s –50s. *One volume*
- ST1.5** AW Oldershaw's paper on 'Tunstall light land experiments' from the Suffolk Farmers' Journal, early 1950s, with a few notes, diagram and newspaper cutting. *Five documents in folder*
- ST1.6** Photographs of experiments (potatoes, barley, wheat, sugar beet, peas) 1940s, some undated, all black and white, list with photographs. *14 photographs*
- ST1.7** Photographs from a journal of Tunstall experiments (lucerne, lupins, parsnips, sugar beet). *Four photographs*
- ST2 Saxmundham to about 1964**
- ST2.1** Reports and related pamphlets, 1901 – 63 (some gaps); short history, 1899 – 1959. *17 pamphlets in one bundle*
- ST2.2** 'Experiments on arable crops at Saxmundham' by AW Oldershaw in *JRASE*, volume 102, 1941; *Agriculture*, December 1959 and January 1960, with articles by EJ Russell on '60 Years of Saxmundham'. *Three pamphlets in folder*

- ST2.3** 'Field Books' kept by AR Oldershaw and PJO Trist, 1930s – 1950s, ie books of correspondence etc, as for Tunstall above. *Three volumes*
- ST2.4** Agricultural Executive Committee AEC 36/323: Saxmundham Experimental Station: 'Miscellaneous correspondence', mainly correspondence of AB Garner of AEC and including letters of DA Boyd of Rothamsted, 1947 – 55. *One folder*
- ST2.5** MAF (sic) folder 46/6 and 46/6A: General correspondence (meetings, open days, repairs, wages) 1940s – 60s, mainly late 1950s and 1960s. *Two folders*
- ST2.6** MAFF folders 2404 and 2404A: Saxmundham Experimental Station: General technical correspondence and data, 1950s, 60s. *Two folders*
- ST2.7** MAFF folder 2776: Saxmundham Experimental Station: 'Purchase of bulk supplies, 1960 – 1. *One folder*
- ST2.8** Letter from EJ Russell to PJO Trist 1959, describing his first visit to Saxmundham, c1912. *One document in folder*
- ST2.9** Saxmundham ready reckoner, undated. *One folder*
- ST2.10** Annual reports, 1925 – 63 (some gaps). *One folder*
- ST3** **Saxmundham after 1964**
- ST3.1** Saxmundham Sub-Committee minutes, notes and proposals, 1960s, early 1970s. *One bundle*
- ST3.2** General administrative correspondence, 1964 – 70, mainly with R Hull, G Cooke and V Woolnough of Saxmundham, including a letter from G Cooke saying he did not wish to continue the experiments. *One large bundle*
- ST3.3, 4** Volumes with titles 'minute book' and 'ledger' including reports of management visits to Saxmundham, 1964 – 77; report on Saxmundham soils, 1959; list of reports handed to Dr Hull of Brooms Barn in 1964; a loose paper 'The Soils of the Experimental Field at Saxmundham' by Joan Thurston 1967; minutes, notes, diagrams, details of soil samples and loose newspaper cuttings on agricultural matters, not always relating to Saxmundham. *Two volumes*
- ST3.5** Guide 1966, notes on experiments prepared for visitors in 1970, list of publications describing results of Saxmundham experiments, brochure for Open Day 1999 and lecture 'A Hundred Years of Agricultural Research'. *One folder*

- ST4** **Photographs**
ST4 Tunstall 1934, Saxmundham 1912, 1930s – 60s. *One folder*
- ST5** **General**
ST5 East Suffolk Education Committee 'Notes on the use of chalk and lime in East Suffolk' by AW Oldershaw and AW Punter, c1938; 'Sugar beet experimental work in East Suffolk to the end of the season, 1938, a summary of conclusions'; Agricultural sandland survey, c1948; report on cultivation of lupins, c1948. *Four documents*
- ST6** **Meteorology**
ST6 Weekly meteorological records, 1973 – 87, excluding 1974 – 7. *Three boxes*



ROTHAMSTED
RESEARCH

Library & Archives

STA

Staff general, especially Staff Union, 1918 onwards

Extent and form:	Seventeen boxes, ten volumes
Location:	Store
Administrative history:	Created at or for Rothamsted
Custodial history:	Kept at Rothamsted and transferred to the Archives occasionally since 1984; Staff Union records transferred in 2009
Accruals:	Likely, if other material is found or created eg Christmas cards
Existence of copies:	Likely, at Rothamsted and elsewhere eg among papers of former staff
Related material at Rothamsted:	Current and semi-current personnel records are kept by Human Resources
Related material in other repositories:	None known
	Updated 25 October 2011

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

Most of the archives below relate to the Staff Union. This had its origins in November 1918 when the Director (Russell) called a meeting of staff to 'discuss arrangements for restarting (*sic*) regular staff meetings'. This resulted in the formation of the Staff Union (by February 1919), the activities of which were managed by two sub-committees: the Common Room (Social) Committee and the Business Committee. One function of the latter was to represent the views of staff on 'various questions of interest and importance'. It is believed that the role of the Business Committee was soon subsumed by the Staff Council, which was established in 1921 and consisted of all Heads of Departments and two elected representatives of junior staff. Social activities remained the responsibility of the Staff Union, which continues as the Sports and Social Club. The last minutes in the series below were signed in February 1980 and Staff Council probably was abolished in the early 1980s

STA1 Personnel and administration

STA1.1 Staff list 1903 – 49 including dates of arrival and departure, nature of work and funding, plus loose partial copy, 1903 – 20. *One volume, fragile, access restricted, consult librarian*

STA1.2 General information for staff, c1962. *One item*

STA2 Staff Council

STA2.1 – 10 Minutes, 1921 – 80, with index, 1948 – 55. *Five volumes, four binders, one folder*

STA3 Staff Union/Sports and Social Club

STA3.1 Minutes

STA3.1.1 Executive committee minutes 1919 – 77, 1979 – 89. *Eight volumes, one folder, one ring binder*

STA3.1.2 Annual General Meeting minutes, 1946 – 88. *Four volumes, one folder*

STA3.1.3 Staff meeting and agm minutes 1918 – 46. *One volume*

STA3.1.4 Business committee minutes, 1919 – 20. *One volume*

STA3.1.5 Art club committee minutes, 1954 – 72. *One volume*

STA3.1.6 Bridge club committee minutes, 1937 – 63, also including Common Room Management Committee minutes, 1930 – 1. *Two volumes*

STA3.2 Finance

STA3.2.1 Cash books, 1928 – 46 (continuing from previous one, now missing). *Two volumes*

STA3.2.2 Petty cash books, 1935 – 9, 1954 – 62. *Four notebooks*

STA3.2.3 Subscription book, 1936 – 48. *One volume*

STA3.2.4 Treasurers' and auditors' reports, clubs' accounts, allocations' requests etc, 1937 – 2000, not complete for every year. *Two boxes*

STA3.2.5 Analysis books, 1968 – 1999. *One folder, nine volumes in two boxes*

STA3.2.6 Club cash analysis books: cribbage 1999 – 2000; hockey 1995 – 2000; social committee, 1975 – 96. *Five volumes*

- STA3.2.7** Bar cash analysis books, 1975 – 93, with gaps. *10 volumes*
STA3.2.8 VAT record books, 1975 – 9. *Five volumes*
STA3.2.9 Miscellaneous receipts, subscribers' lists, balance sheets, cheques and statements, many rolled, not fully examined, mainly 1930s – 1950s. *One box*
- STA3.3** **Clubs, entertainment and sport**
- STA3.3.1** Annual reports from SU clubs, committees and societies, not always complete for each year, 1957 – 85. *Six folders*
STA3.3.2 Programmes, invitations and scripts etc for entertainments, including some leaving parties, 1919 – 80s. *Six folders*
STA3.3.3 Undated, mainly mid 20th century, scripts and posters for staff entertainments. *One folder*
STA3.3.4 Retired staff party papers, mainly notices in Bulletin and letters of thanks, 1980s. *One folder*
STA3.3.5 Children's party papers, 1964, 1980s, very few. *One folder*
STA3.3.6 Christmas cards, 1929 onwards and calendar, 2007. *Seven folders*
STA3.3.7 Histories of Rothamsted clubs and of some clubs in Harpenden, prepared for the Local History Society's exhibition on sport in Harpenden, 1980, plus copy photographs of Rothamsted Ramblers Hockey Club, c1900. *One folder*
STA.3.3.8 Photographs of Rothamsted Rocket, Staff Union's prizewinning float at Harpenden carnival, early 1970s.
- STA3.4** **Administration**
- STA3.4.1** Administrative letters and circulars including the organisation of social events, upkeep of the bar, pavilion and sports field, representation on committees and similar general matters, 1970s, 1980s, few only, no earlier correspondence found. *One folder*
- STA3.4.2** Rules and guidelines including Staff Union rules, rules of clubs, rules for use of the pavilion, manor and Red Gables, duties of departmental representatives, guidance notes for club accounts, 'Facts of Life at Rothamsted, 1960s – 90s. *One folder*
- STA3.4.3** Letters and certificates on club registration, licences, fire certificates and bond certificates, 1950s – 70s. *One folder*
- STA3.4.4** Lists of office holders, 1970s, 1980s. *One folder*
- STA3.5** **Property**
- STA3.5.1** **Pavilion**
- STA3.5.1.1** Correspondence, estimates, notes, plans and planning permissions for building, 1960. *One folder*
STA3.5.1.2 Correspondence, estimates, notes, plans, planning permissions and questionnaire for wc, showers and changing rooms, early 1970s. *One large bundle*
STA3.5.1.3 Correspondence on modifications, 1986. *One small folder*

- STA3.6** **Report**
STA3.6.1 Memo on the Rothschild Report 'A Framework for Government Research and Development', 1972, staff signatures and related papers from other organisations. *One folder*
- STA3.7** **Miscellaneous**
STA3.7.1 Names and addresses of Rothamsted players in St Alban's Sunday football league. *One bundle*
- STA4** **General**
STA4.1 Register of assistant staff, c1909 – 50. *One volume*
STA4.2 Register of fees paid by temporary workers, 1925 – 55. *One volume*
STA4.3 List of staff joining Federated Superannuation Scheme for the Universities/FSSU, 1945 – 52. *One volume*
STA4.4 Lists of graded staff pay, deductions and contributions, 1948 – 9. *One volume*
STA4 includes references to named individuals and is not available for consultation



ROTHAMSTED
RESEARCH

Library & Archives

STATS

Statistics, 20th century

Extent and form:	49 boxes, contents in fair condition, many in non-archive quality packaging
Administrative history:	Created at Rothamsted. In archives before 1984 and received at intervals since then.
Custodial history:	Unknown before transfer to archives.
Accruals:	Possible but unlikely.
Existence of copies:	None known
Related material at Rothamsted:	Extensive. These boxes are not the complete archives of the Statistics Department founded in 1919 but miscellaneous items that have come to the archives at random. In 2012, the department of Computational and Systems Biology holds a substantial quantity of archives.
Related material in other repositories:	Possible but none known
	Updated 31 October 2012

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

E J Russell in *A History of Agricultural Science in Great Britain* says the Statistics Department was started in 1919 with RA Fisher and one mathematician; in 1983, with Computing, it formed Biomathematics. The archives below are not the complete archive of statistical work at Rothamsted.

- STATS1** Memo on the use of statistics and the case for additional staff, undated. *One folder*
- STATS2** Draft for paper on variations in wheat yield, possibly by RA Fisher for the Journal of Agricultural Science, volume XI, part 2. *One folder*
- STATS3** Survey of fertilizer practice: original survey tabulations, preliminary tabulations for more investigations, tabulations and tables on types of fertilizer used, files by county, general files, late 1930s – early 1950s. *33 files in three boxes. Note: files not examined – information taken from list with files. There were numerous other boxes relating to this Survey in the then Statistics Department in the 1980s but these are no longer there. There is no indication why these files were separated from the bulk of the collection.*
- STATS4** The following items are the contents of three boxes that came to the archives from the Statistics Department in 2002. They have not been numbered individually as they may in future be returned to Statistics or transferred to a repository specializing in the history of computing. All are one file unless otherwise indicated. The titles are copied from the files.

Computer department

Programme Manual for Rothamsted General Survey Programme part 2, 1973 (PM/2)
Programme guide, 1978 (PG 134/5)
Maximum Likelihood Programme, 1980
Genstat manual, 1983
Genstat and Experiments, notes for readers of output, 1975

Programme and programming facilities available on the Rothamsted Orion

1 – 63
64 – 89 (two copies, probably duplicates)
Simulation (two copies, probably duplicates)

Surveys and experiments programme

Provisional description, 1963
Mark 1, 1966

Miscellaneous Rothamsted

Chapter II of 'Design from the Computer' by GV Dyke, undated
Four files with title 'Bats' and with note attached 'This was always going to be written up but never was. By Howard Simpson initially. Ruth 13.1.95.'

Miscellaneous not Rothamsted

Bibliography on design of experiments by Herzberg and Cox, 1958
DSIGN users' manual, 1974 from ARC Unit on Statistics.

Newsletters

Computer department newsletters, 18 – 73, 1973 – 82. *One box*

STATS5 Administrative archives mid 20th century onwards, found in the Fisher Building after the department of Biomathematics and Bioinformatics moved to another part of the Rothamsted site; includes reference to named individuals, not available for consultation. *Eight boxes*

STATS6-STATS 20 Files previously identified as 'Statistics Archives' transferred to the Library Archives in December 2011. These files were identified as the 'Statistic Archives' before the mid-1980s. They were not arranged systematically and it was not clear why they were identified as the Statistics archives. They have been rearranged so as to bring together records of named individuals.

STATS6 RA Fisher

STATS6.1 Rain and longitude: Hertfordshire rainfall correlations. 1919
Rain: distribution of weekly rainfall, Aberdeen. Correlation of weekly rainfall, Quarterly Journal of the Royal Meteorological Society, Volume XLVIII, 1922 (with WA Mackenzie): data and notes on rainfall, c1919 – c1922.
Rainfall: monthly correlations, Rothamsted, Aberdeen, Borrowdale. N. d.
Rain: analysis by monthly totals. N. d.
Rain: Hertfordshire. N. d.
Rainfall: correlations, Rothamsted, Aberdeen, York. N. d.
Microplots: Correspondence with Fisher and figures on work by Colonel Chance of Salisbury on microplot experiments, 1920.
Wheat: Broadbalk correlation of residuals with rainfall coefficients. c1850-c1920. Possibly used for 'The influence of rainfall on the yield of wheat at Rothamsted' Phil.Trans. Volume 213, 1924. Also copy of 'A note on grain size distribution in wheat from Broadbalk by AH Bunting, c1945. *One box*

STATS6.2 Index numbers: postcards to Fisher from K. C. Smith of LSE with totals of wholesale prices and related graph. 1922-1933
Wheat: Broadbalk - calculations on dressed grain. Studies in crop variation: an examination of the yields of dressed wheat from Broadbalk, JAS Volume XI, 1921: data and notes.
Phenological observations: mainly Hertfordshire and including observations by staff members Brenchley, Glynne and Warrington, 1921 –1924. *One box*

STATS6.3 Animal husbandry sub-committee. Sheep and pig experiments. 1932-1933.

Pig experiment. 1935-1936.
Sheep weights. 1930-1931.
Pigs: ration feeding. 1933-1934.
Agricultural Meteorology International Committee: circulars, mainly in French about the International Committee on Agricultural Meteorology; report from conference on Agricultural meteorology. 1923-1929. (*Fisher was a committee member*).
Agricultural Meteorology Committee: minutes etc. 1932.
Agricultural Meteorology Permanent Committee. 1924-1928.
One box

STATS6.4 Fisher and Behren's test. N. d.
Barley. R. A. Fisher: effect of sowing date and rainfall near sowing date on yield of barley (Hoosfield). 1852-1936.
R. A. Fisher's lecture notes on Ascertainment: selection in the process of ascertainment (about albinism). 1934.

Correspondence with W. L. Stephens and F. C. R. Jourdain on British birds. 1928-1934. *One box*

Found in annex strong room 1980s
Letters from HT Brown, 1917; sketch from Rome conference 1927 and photographs of awards, 1934 – 55, received from Statistics in 1990. *One folder; there is an article on RA Fisher in the American Statistician, 59 (2) May 2005.*

STATS6.5 RA Fisher and F Yates
Drafts and proofs of "Statistical Tables for Biological, Agricultural and Medical Research". First edition, 1930s.
Miscellaneous proofs
Tables: Galton Lab checked copy
Graeco Latin Squares
Tables ready for printer
Tables. Spares copies
Tables, manuscript. *One box*

STATS6.6 RA Fisher and F Yates
The 6 x 6 Latin squares, Proceedings of the Cambridge Philosophical Society, Volume XXX, 1934: data
Samuel virus work. Analysis of variance. Experiment R45 Latin Squares
Virus inoculation
Latin Squares 5 x 5
Latin Squares 1 and 2
Latin Squares 6 x 6. *One box*

STATS7 F Yates
STATS7.1 A new method of arranging variety trials involving a large number of varieties, JAS Volume XXVI, 1936: data and notes.

A further note on the arrangement of variety trials. Pseudo Latin squares. *Annals of Eugenics*, Volume VII, 1936: data.

Soil temperatures. N. d.

Miscellaneous. N. d.

Incomplete Latin squares, *JAS* Volume XXVI, 1936: data.

Incomplete randomised blocks, *Annals of Eugenics*, volume VII, 1936: data.

An analysis of replicated experiments when the field results are incomplete, *Empire Journal of Agriculture*, Volume I, 1933: data.

Potato experiments with different forms of potash: notes. 1927-1931.

The principles of orthogonality and confounding in replicated experiments, *JAS* Volume XXIII, part 1, 1933: data and correspondence. 1933-1936. *One box*

STATS7.2 The design and analysis of factorial experiments, Imperial Bureau of Soil Science Technical Communication number 35, 1937: data, notes and proofs.

A complex pig feeding experiment, *JAS* Volume XXIV, 1934: notes, figures and report.

Complex experiments, *Journal of the Royal Statistical Society* supplement, Volume II 1935: data and notes.

Contingency tables involving small numbers and the X^2 test, *Journal of the Royal Statistical Society* supplement, Volume I, 1934: data and notes. *One box*

STATS7.3 The recovery of interblock information in variety trails arranged in three dimensional lattices, *Annals of Eugenics*, Volume IX, 1939.

F. Yates and T. Eden

On the validity of Fisher's Z test when applied to an actual example of non-normal data, *JAS* Volume XXIII, 1933: data and notes.

F. Yates and I. Zacopanay

The estimation of the efficiency of sampling with special reference to sampling for yield in cereal experiments, *JAS* Volume XXV, 1935: data and notes. *One box*

STATS7.4 Gold Coast Survey Dept. Report on survey and adjustment of a network of precise traverses measured between 1924 and 1930 in the Southern portion of the colony. Records. Volume 3. By F. Yates. H. Wace

Gold Coast Survey Dept. Notes on the application of the method of least squares to the adjustment of triangulation and level and traverse networks. 1929. By J. Clendinning and F. Yates

Gold Coast Survey Dept. Report on three chains of triangulation surveyed in the southern part of the colony during the years 1924, 1925 and 1926. Records. Part 1. By J. Calder Wood

Gold Coast Survey Dept. Tables for use in the department. 1st ed. 1929. *One box*

STATS7.5 Yates/Fisher correspondence. Fisher's obituary and relevant correspondence.

File 1. 1933-1937.

File 2. 1937-1945.

File 3. Missing.

File 4. 1956-1961.

File 5. 1962-1986. *One box*

STATS7.6 Working files and papers. (Box 1)

The evolution of a survey analysis program. 1968.

ISI paper. Drafts. 1971.

Notes on research in plant breeding and genetics. 1951.

Trials of coffee progenies. 1955.

Variable format in Fortran. N. d.

The analysis of surveys on computers – features of the Rothamsted Survey Program. 1971-1973.

Plant diseases in the tropics. 1951.

Publications. Requests for reviews and articles. 1971-1982.

Review of R. S. Fisher's biography by Joan Box (daughter). 1978-1981.

Collected papers on experimental design. Drafts. 1969.

Breeding for twins and singles. 1952-1953.

Memorandum to ARC on the relative importance of agricultural research problems. Dissemination of technical information to farmers. 1950.

Rotation experiments. 1944-1947.

The place of simple experiments on cultivators fields in agricultural development. 1953.

Rothamsted General Survey Program. Computer Dept Newsletter. 1972.

Elementary statistics – examples. N. d.

Estimation of sampling error of a sample with uniform sampling fraction from a sample taken with probability proportional to size (with replacement) from a large population. 1958.

Operational research. Paper from 4th Session of UN Sub-Commission on statistical sampling. 1950.

Fixed and random effects – a distinction without a difference. 1971.

Determination of research priorities.

Estimation of the yield of potatoes in England and Wales by sampling methods. 1953. *One box*

STATS7.7 Working files and papers. (Box 2)

British Computer Society. General. 1969-1989.

Incomplete blocks – Lattice design. N. d.

GENFAC2. Correspondence. 1967-1971.

General factorial programme. N. d.

Fortran – key information. 1971.
Elementary statistical theory - confusion worse confounded.
Misleading statistical procedures. N. d.
Statistical Tables for Biological, Agricultural and Medical
Research. 7th ed. 1981-1982. *One box*

STATS7.8 Working files and papers. (Box 3)
Broadbalk – weather effects. 1968-1969.
Observations on noctule bats captured while feeding. Appendix
to paper by Lord Cranbrook and H. Bennett. 1964.
Computers, the second revolution in statistics. 1st Fisher
Memorial Lecture. 1966.
Design and analysis of factorial experiments TC35. 1981
The early history of experimental design. 1973.
Discussion of reports on cloud seeding experiments. 5th
Berkeley Symposium. N. d.
Fisher obituary. Royal Society correspondence. 1962-1964.
A Monte-Carlo trial on the behaviour of the non-additivity test
with non-normal data. 1971.
Sampling methods for censuses and surveys. Reviews. 1949-
1983.
Theory and practice in statistics. 1968-1972.
Sampling methods for censuses and surveys. 3rd ed. 1959-
1966.
Sampling methods for censuses and surveys. New ed. 1977.
Sampling methods. 1978-1980.
Scientific Encyclopedia. Revision of 3rd ed. 1954-1973. *One
box*

STATS7.9 Working files and papers. (Box 4)
Design of experiments. 1950-1951.
“Horn and Corn” – Can Britain Feed Herself? Script of BBC
transmission,
15 February 1949.
A note on the improvement of an automatic programming
routine. 1960.
Election. 1951.
Theory and practice in statistics. Presidential address to Royal
Statistical Society. 1968. *One box*

STATS7.10 Working files and papers. (Box 5)
2 x 2 computations. 1981.
2 x 2 compared comparisons. N. d.
2 x 2 reply to discussion. 1984.
Tests of significance for 2 x 2 contingency tables. 1984.
Tests of significance for 2 x 2 contingency tables. 1983.
Sampling methods. Chapter 10. Literature. *One box*

STATS8 **T N Hoblyn**

A statistical analysis of the daily observations of the maximum and minimum thermometers at Rothamsted, Quarterly Journal of the Royal Meteorological Society, Volume LIV, 1928.
Meteorology temperatures 1878-1888.
Meteorology temperatures 1888-1898.
Meteorology temperatures 1898-1908.
Meteorology temperatures 1908-1918.
Meteorology temperatures 1918-1926.
Maximum and minimum temperatures. 1878-1926.
Temperature work: analysis of variance etc. 1878-1926.
Temperature work: curve fitting etc. 1927.

FE Allan

The general form of the orthogonal polynomials for simple series with proof of their simple properties, Royal Society of Edinburgh Proceedings, Volume 1930: notes and proof.

DA Boyd

Temperature polynomial fitting. The estimation of Rothamsted temperature from the temperature of Oxford and Greenwich, Annals of Eugenics, Volume IX, 1939: data and notes. *One box*

STATS9

JO Irwin

On the influence of soil temperature on the germination interval of crops, JAS, volume XXI, 1931.
4" and 8" soil temperatures. 1924-1928.
Influence of soil temperatures on germination interval of crops. c1930.
Report on agricultural crop observations (manuscript). 1929.
Crop weather data: mean interval between sowing and appearance above ground. 1924-1928.
Wheat, winter oats, spring barley and swedes. Correlation between interval and mean daily soil temperature. 1924-1928.
Mean soil temperatures in germination intervals. 1925-1928.
Crop weather data. Interval between sowing and breaking into ear. 1924-1928.
Lecture on weather and the farmer and crop forecasting. 1930.
One box

STATS10

RJ Kalamkar

STATS10.1

A statistical examination of the yields of mangolds from Barnfield, JAS Volume XXIII, 1933.
The influence of rainfall on the yield of mangolds at Rothamsted. 1933.
Thesis. Rough working sheets. N. d.
A study in sampling technique with wheat. 1932.
Experimental error and the field plot technique with potatoes. N. d.
Barnfield mangolds. Summations. 1876-1930.

Rainfall. 17 March to 17 November. 6-day periods. Curves for yield and rainfall response. 1876-1930.

Rainfall data. Miscellaneous rainfall charts. 1858-1929. *One box*

STATS10.2 More files on rainfall, possibly not all Kalamkar.
Coefficient of 5th degree polynomials. N. d.
Rainfall polynomials. 1854-1930. *One box*

STATS11 RS Koshal

Shoot height and number. N. d.

The effect of rainfall and temperature on percolation through drain gauges, 1934. JAS volume XXIV, 1934: notes and drafts.

WA Mackenzie

Studies in crop variation III: an examination of the yields of dressed grain from Hoosfield, JAS Volume XIV, 1924

Examination of the field of dressed grain from Hoosfield. 1924.

Examination of the yield of barley at Rothamsted.

AT Legge

Notes on Rothamsted electro pot culture experiments. 1918-1928. *One box*

STATS12 WB Mercer and AD Hall

Wheat. Variation of yield in small plots. N. d.

Wheat. Precision observations. 1932-1935.

Wheat data. N. d.

Mangel plots. N. d.

Seeds dormant in subsoils. 1910.

Experimental Error in Field Trials, JAS Volume IV, 1911.

O Tedin

The influences of systematic plot arrangement upon the estimate of error in field experiments. 1931.

HG Thornton

Observations on soya beans. c1930. *One box*

STATS13 J Wishart and WA Mackenzie

Influence of rainfall in the yield of barley at Rothamsted. c1930.

J Wishart

Potatoes: fertility and contour maps and rough sheets.

Broadbalk dynamometer trials. 1920s.

Barley: Churchfield, Jealott's Hill Farm. c1930.

Nitrogen: increase of yield. c1930.

Rainfall: effect of nitrate of soda plots on Broadbalk. c1930.

Statistical analysis of Shoby mixed grazing trials. 1927.

Sheep grazing trials at Thrussington and Bridgewater. 1925-1928.

Sheep grazing experiment, Rothamsted. 1928.

Sheep grazing trials, Bridgewater. 1926.

Phosphate grazing experiments. 1924.

Sheep grazing experiment. 1924-1926.

Uniformity trial data, Sawyers Field. 1925. *One box*

STATS14 Barley experiments

Barley weather experiments. Reaseheath, Baghall, Bangor. 1925.

Barley (malting). Gt. Harpenden. H. Campbell's counts. 1927.

Barley. Hoosfield: dry matter data. 1852-1927.

Barley.. Hoosfield: seasonal response to phosphate. 1868-1911.

Barley grading. 1926-1927.

Barley grading. 1928.

Barley. Malting. N. d.

Barley. Hoosfield: various states of growth experimental data. 1904. *One box*

STATS15 Miscellaneous files on notes and data

STATS15.1 Box 1

Classical experiments. Temperature effects.

Computation times.

Confounding enumeration of interactions.

Curve fitting

Dilution series

Fisher computations. 1929

Four course rotation

Maximum likelihood

Miscellaneous computations

Oats in NIAB variety trials

Orthogonal polynomials

Park Grass dry matter. 1904-1922

Phosphates in soils

Pot culture variations

Radio integrator

Random numbers. *One box*

STATS15.2 Box 2

Recording procedure

Sampling methods of estimating yield from experimental plots

Soil fauna

Stones sampling

Straw manure. 1921

Sugar estimation

Turnips

Results of the Woburn experiments on the continuous growth of wheat. 1877-1918

27 designs
 X^2 test in transformation. *One box*

STATS15.3 Box 3

Barometer: composition of world values by years. 17th-20th Century.
Gamma functions – half integers.
Dew Point data. 1915-1925.
Aphid numerics (infestation numbers).
Daily bacterial counts: Barnfield. 1920-1921.
Broadbalk soil sampling. 1891-1910.
Test of significance. Reply to Welch. c1937.
t.s. distributions.
Solution of equations by successive approximation.
Reduction in error due to local control. 1927-1937.
Split lattice. 1943.
Strength of figures in triangulation.
Incomplete randomized blocks, combinatorial solutions.
Graeco Latin squares. *One box*

STATS16 Elliott 401 1954-1965

STATS16.1 Sub-routines A-E.
Sub-routines F-K.
401 general literature. *One box*

STATS16.2 Correspondence on Elliott 401. 1954-2006.
Reeve V and VI programme. N. d.
Structure factors K.1 – programme. N. d.
Fourier synthesis K.2 – programme. N. d.
Sub-routine. Print double length integer. N. d.
G.21. Multiple orthogonal classification (fast). N. d.
G.E.P. description. N. d.
G.11. Missing plots 2^n , 8 x 8 Quasi Latin square modifications 2^n – programme. 1956.
Structure factor constraints – programme, notes and results. N. d.
General factorial programme. N. d.
Division – sub-routine. N. d.
One dimensional Fourier synthesis – programme. N. d.
Scan and call-up F.17 – sub-routine and super scan F.42. N. d.
5 x 5 lattice square model to R/B split plots. N. d.
Split plots covariance – programme. N. d.
Sine-cosine – sub-routine. N. d. *One box*

STATS17 WG Cochran

Uniformity trial data.
Genstat data.
Data received since publication of the catalogue. 1935-1943.
Uniformity trial data. 1930-1936.
Uniformity trials. 1936-1938.

Uniformity trials. R data. 1936-1937.
O. V. S. Heath. Cotton uniformity trial data. 1934-1935.
Data. Yields of grain per foot length. 1934.
Catalogue of field uniformity trial data. N. d.
Demandt. 1931. *One box*

STATS18 DM Moorland and JO Irvin

Examination of beehive temperature.
Bee graphs. Inside and outside temperatures. 1925-1926.
Bee data. Hives H2 and H3. 1925-1926.
Bee data. Hives H1, H4 and H5. 1925-1927.
Curve fittings. Hives H4 and H5. 1925-1926.
Miscellanea. Methods and data. 1925.
Bee paper. Statistical examination of beehive temperature.
1931. *One box*

STATS19 RO Cashen

The influence of rainfall on the yield and botanical composition
of permanent grass at Rothamsted, JAS volume XXXVII, 1937.
Park Grass. Worksheets for 1874-1895.
Park Grass. Worksheets for 1920-1940.
Park Grass. Copies of report and diagrams to A.R.C. 1945.
Park Grass. Miscellaneous notes. 1942-1943.
Park Grass. Rough notes for Table of Manures. 1944.
Park Grass. Draft of paper and diagrams. 1944-1945.
Park Grass. Worksheets. 1858-1902. *One box*

STATS20 Woburn

STATS20.1 Wheat and barley. Bushel weight. Rough sheets. 1877-1926.
Temperature. Woburn and Rothamsted 6-day totals. 1879-
1926.
Wheat. Nitrogen content and rainfall. 1883-1926.
Wheat and barley yields. 1876-1926.
Regressions of differences between wheat and barley yields on
rainfall. Grain/straw ratio. 1882-1906.
Index of Woburn books. N. d.
Rainfall at Rothamsted. Old and new gauges. 1873-1876.
Regression of barley yields on March-April rain (also May-June).
1878-1906.
Woburn graphs. Wheat and barley mean yields. 1877-1906.
Regression of barley yield on ten weather variates. (Also
Regression on monthly temperatures). 1899-1926.
Regression of wheat yield on monthly rainfalls and sowing data.
1877-1906.
Correspondence (chiefly Dr Mann). 1930-1932.
Woburn rotation experiments. 1877-1906.
Woburn diagrams. Mean yields of grain. 1882-1926.
Green manuring experiment. 1912-1934. *One box*

STATS20.2 Woburn wheat and barley data. Yields of grain and straw.

Manuring tables, varieties and sowing data. 1877-1932.
Nitrogen % data. 1884-1926.
Woburn meteorological data, Experimental Station and Fruit Farm. 1877-1926.
Thousand grain weight data. 1883-1926.
Regression of barley yield on weather varieties, March-April rain and rainfall 60-90 degrees after sowing. Also other varieties. N.d.
Tables for Woburn Book. 1877-1926.
Graphs. N. d.
Influence of rainfall on Woburn. Wheat and barley yields (Fisher's method). 1877-1906.
Influence of six months rainfall on barley yield (Fisher's method). 1877-1906.
Woburn wheat and barley. Determination throughout 50 years (Fitted polynomials). Effects of rainfall on three plots throughout 50 years.
Woburn barley grain. Regression of nitrogen content on sowing date: May and June rain, July temperature. (Woburn rainfall data used, Rothamsted temperature data used). 1885-1926.
Woburn barley. Influence of maximum temperature and of rainfall and temperature together on nitrogen content (Fisher's method). 1884-1926.
Influence of rainfall on nitrogen content of Woburn barley (Fisher's method). 1884-1926.
Woburn barley. Thousand grain weight. 1885-1926. *One box*



ROTHAMSTED
RESEARCH

Library & Archives

STF

Staff (individuals) and others connected with Rothamsted, late 19th century onwards

Extent and form:	29 archive boxes, two wooden boxes, 13 volumes (one large), one roll and one large bag
Administrative history:	Created at Rothamsted in the course of employment or by individuals, not all of whom were employed at Rothamsted, in their personal or working lives
Custodial history:	In the Annexe strongroom in 1984 or given to the archives since then.
Accruals:	Possibly. This record series does not represent a systematic attempt to bring together all staff records. Other such records may be with Human Resources or in the appropriate department and in some cases items for an individual may be both in the archives and in a department. It also includes items from people connected with but not directly employed by Rothamsted.
Existence of copies:	None known
Related material at Rothamsted:	PHO includes some photographs of some staff and Human Resources has staff records.
Related material in other repositories:	None known
	Updated 2 November 2012

Access and Copyright:

Contact the Librarian:

Liz Allsopp Phone: 01582 763133 ext. 2657

Email: liz.allsopp@rothamsted.ac.uk

This collection of papers relating to staff members and others connected with Rothamsted is not a formal collection of staff records. Instead, it is what has found its way to the library archives and represents only a few of the many Rothamsted employees and contacts. It varies from a single document or folder for an individual to one or more boxes. It is in order of acquisition and is added to whenever something new is given to the library.

- STF1** **Edwin Grey**
Personal papers including school copy book, letters, newspaper cuttings and photographs, 1870s to 1940s; testimonial for 50 years service at Rothamsted, 1922; list of 'some old articles used in the Laboratory in the very early years', 1922; rough notes on laboratory work, early 20th century; drafts of *Cottage Life in a Hertfordshire Village*, *The Old Experiments* and *Reminiscences of Rothamsted Experimental Station and Fields*, 1920s and 1930s. *One box*
- STF2** **GC Sawyer**
Army discharge certificate, 1916. *One roll*
- STF3** **AW Rymer Roberts**
Notebooks on insecticide trials on wireworms, 1916 – 8. *Three volumes*
- STF4** **Winifred Brenchley**
Notebooks on work at Blakeney Point, 1919 – 22; commemorative book of staff signatures, 1948; diplomas prepared by Rothamsted staff, 1911 and undated. *Three notebooks in Annexe strongroom, two diplomas under stairs in Annexe; see also BOT*
- STF5** **Margaret Holden**
Letters concerning chlorophyll-derived compounds in Leaf Protein that cause a photosensitivity in mice (1970s); miscellaneous letters from WG Frankenberg, Bill Pirie, Geoff Wiltshire, EC Large (ECL), T Eden (all 1950s – 1960s), Roy (Markham?), Robin Hill (dates uncertain) and 'Tony' Pirie (1977); script for a lecture on chlorophyllase; an incomplete biographical memoir; press cutting from a local newspaper (probably the Herts Advertiser); obituary (from *The Mycologist*); list of publications. *One folder*
- STF6** **DJ Matthews**
Notes on work on nitrates c1920. *Three notebooks*
- STF7** **AEA (possibly AE Ashford)**
Notes on trials of phosphates for hay, 1920s. *One notebook*
- STF8** **JR Moffatt**

Notebook and examples of grasses with title 'Botany – Grasses, SE Agricultural College, Wye' undated. *One volume*

- STF9** **F Tattersfield**
Notes on scientific work, including pyrethrum, 1918 – 1930s; report of a visit to the USA, 1935. *Four notebooks, two binders, one folder*
- STF10** **B Weston**
Typescript of 50 years at Rothamsted 1910 – 1960 with notes and letters of acknowledgment. *One volume and loose papers; see also FARM*
- STF11** **Herbert Curren**
Notes on his early life at Rothamsted and work on the Farm; photographs of Curren at party to commemorate 50 years of service by him, WC Game and FJ Seabrook, 1961. *One folder; notes photocopied from originals lent to George Dyke by Mr Curren's son, November 1987*
- STF12** **EM Crowther**
Diary of visit to British and French colonies in West Africa, 1938 – 9, with loose inside, photocopy of letter from Crowther to Schlacht, 1929, received from George Dyke, 1993. The report of this visit is in the National Archives, PRO 554/139/4; obituaries, 1954. *One volume, one folder, see also CHEM*
- STF13** **Ernest Shackleton**
Notes on soil samples collected by Shackleton or Wilkins for Sir EJ Russell in Antarctica, 1921 – 2, with explanatory letter from the donor, P Nutman, 1998. *One envelope*
- STF14** **SN Winogradsky**
Correspondence with Helen Winogradsky, HG Thornton and EJ Russell, 1926– 53, photographs and obituaries. *One folder given to the Library by Dr Hedges of Bristol University in 1993*
- STF15** **G Davies**
Notes on work on the experimental plots in 1948, and letter, 1936. *One envelope received from Mr Davies in 2001*
- STF16** *Number not in use*
- STF17** **VM Goldschmidt**
Personal and scientific correspondence with WG Ogg, 1943 – 7; correspondence relating to Goldschmidt's time and work in England, including letters from the 1950s to 1980s. Biochemical News, *Two folders, each including notes on their content; see <http://www.geochemsoc.org> for a paper on VM Goldschmidt: the British Connection by GP Glasby, 1996*

- STF18** **RD Winslow**
Notes for work on nematodes on the Classical Experiments, late 1950s, early 1960s. *One green binder*
- STF19** **Trevor Lewis**
Contract, 1961 and programme for farewell reception, 1993. *Two items received from Dr Lewis, 1993*
- STF20** **HH Mann**
Biographical notes by GV Dyke, prepared 1990s. *One small folder; see also WOB*
- STF21** *Number not in use*
- STF22** **Leslie Sutton**
Text of speech on retirement, 1990. *One document*
- STF23** **Peter Loveland**
Clay mineralogy: audio-tape, cd and related paper; typescript paper on Mineralogy and Crystallography by IG Wood, undated. *One folder*
- STF24** **Donald Preece**
Notes on the Rothamsted anthem, part of an entertainment at a meeting for the centenary of RA Fisher's birth, February 1990. *One folder*
- STF25** **Amy Coburn**
Plans of the Garden House at Laboratory House, probably a summerhouse in the Director's garden, 1924 and of alterations to 1 and 2 Redbourn Lodges, Harpenden, 1938. *Three items, received in 1999 from Mrs Coburn, whose father-in-law was a local builder who did work on the Rothamsted estate.*
- STF26** **Michael Elliott**
National Research Development Corporation Bulletin, 51, winter 1979 – 80 with details of the pyrethrum programme at Rothamsted and Dr Elliott's personal account of pyrethroids; abstracts and delegates' list for memorial symposium 'Future prospects for chemical insecticides', 2010. *One pamphlet, one folder*
- STF27** **Blanche Benzian**
Notes on work on Knott Wood, c1940; letter from VM Goldschmidt, 1945 and letters from EM Crowther, 1946 – 51; photographs, most unidentified but including group photograph of the Chemistry Department, 1975; photograph album presented on retirement, 1976. *One folder, one album*

- STF28** **Mary Glynne**
 Dr Glynne gave most of the material in this collection to Rothamsted Library shortly before she died; similar material of hers found later at Rothamsted has been added. The papers, which include material from Dr Glynne's co-workers, have not been sorted and include drafts and duplication. They are not in archive quality packaging.
 A wooden box containing glass lantern slides and another containing a scientific instrument (thought to be a polarimeter) also came to Rothamsted from Dr Glynne's house shortly before she died. These, and a metal box containing 35 mm slides (some glass), are stored with Dr Glynne's papers.
- STF28.1** Notes, data and photographs relating to Dr Glynne's scientific work, 1920s – 60s. Includes disease data obtained from Classical Experiments, especially Broadbalk. Also samples of wheat affected by *Gibellina cerealis*, a pathogen that, in the UK, has only been reported from Rothamsted. *Seven boxes*
- STF28.2** Miscellaneous items found at Rothamsted:
 Correspondence with Sir John Russell; notes on the Plant Pathology department, possibly prepared for a book of Russell's; notes on Rothamsted and its work and for guiding parties, 930s, 1940s; notes on conferences in Scandinavia, 1950s – 60s.
One folder
 Notes on the Roman temple, with aerial photographs, 1930s – 70s. *One blue folder*
 Photographs of Rothamsted and Rothamsted staff, 1920s – 50s, including a formal and informal one of RA Fisher. *Two folders*
 Letters from Edwin Grey, early 1950s. *One folder*
 List of publications and a few pamphlets. *Loose*
All of the above are in one box
- STF28.3** Correspondence, photographs, newspaper cuttings etc. deposited by Dr Glynne's family (see Librarian). *Two boxes*
- STF28.4** Two albums of science-related photographs. *One box*
- STF29** **Don and Marion Watson**
 Photograph albums of visits to Australia, New Zealand and the United States, 1940s.
Marion Watson: papers on employment at Rothamsted including *curriculum vitae* and salary details, 1929 – early 1940s; general correspondence on work at Rothamsted covering work in progress, preparation of papers, building alterations and some personal and domestic matters, 1938 – 70. The correspondence is incomplete and includes letters without replies and vice-versa. Black and white photographs of buildings, crops, staff, coronation celebrations and cat 'Sputnik'

probably taken by Marion Watson in the 1950s; album of photographs presented to Marion and Don Watson in 1971. *This material was given by Betty Lennon to George Dyke and by him to Rothamsted Library in 1994. There is no supporting paperwork and the collection has not been examined in detail.* Offprint of chapter on Marion Watson by Bryan D Harrison from *Pioneering Women in Plant Pathology*, 2008.
Don Watson: History of Rothamsted, c1973, with related notes; a study of the respiration of apples, compiled at Cambridge. *Three volumes and one box*

- STF30** **Tom Goodey**
Personal interleaved and annotated copy of his book *Plant Parasitic Nematodes*, 1933; original drawings for work by T Goody and JB Goody, 1930s to 1950s; design for tile, 1913 and letter, 1984; biography, 1994; reminiscences by his daughter, 2000. The tile design was photographed here by a relation, possibly a niece or granddaughter, in the late 1990s. *Four boxes, all except the tile drawing brought to the archives by David Hooper when he retired in 1995; the tile drawing was in the archives by 1984; the reminiscences are closed until 2020.*
- STF31** *number not used*
- STF32** **George Cooke**
Photocopy of a paper by George Cooke on techniques for field experiments on agricultural crops, 1951; tribute by AH Bunting, 1992 and numerous photographs given to the Library by Beth Cooke via George Dyke and unsorted, early 1990s. *One box*
- STF33** **EC Large**
Closed until 2025, consult Librarian
- STF34** **Kay Boutwood**
Lecture notes, supporting papers and slides, received 2000. *Two boxes*
- STF35** **Roger Plumb**
Description of the Golden Jubilee Walk, 2002. *One item*
Commemorative booklet: Sir Richard Southwood, a near 60 year relationship with Rothamsted, 2004. *One booklet*
Notes, photocopies and printouts arising from work on James Wittewronge, Charles Lawes, Marianne Warde née Lawes, the Manor wall paintings and laboratory staff members, 2006 – 7. *One folder*
Colour prints or slides of frontispiece and of pages 1 – 10, 44, 72, 97 – 9, copies of EXP 3.2 made in 1994.
CDs of Charles Lawes' receipts, made 2007 and explanatory note. *Six discs; originals JBL5.1; see also LAT50 and LAT51*

Plans of Rothamsted estate conveyances, 1921 – 66, prepared 2003. *One folder and four rolls stored as a single roll*
Catalogue: The Rothamsted Collection of Prints and Paintings of British Farm Livestock 1780 – 1910, prepared by Roger Plumb, 2004 and based on DH Boalch's 1958 catalogue. *One volume*

- STF36** **DA Louis**
Notes on scientific work and personal letters, 1884, 87. *One bundle*
- STF37** **George Dyke**
Photocopies relating to JB Lawes' published papers used in his book 'The Record of his Genius'. *One large bundle of photocopies*
- STF38** **EC Humphries**
Photographs at work and with colleagues, of the Botany Department staff with some members identified, of the Allotment Club House being demolished, and aerial photographs, 1950s and 1960s. *One folder*
Framed photograph of JB Lawes, possibly from the Allotment Club House. *One framed picture, received with the other material from Humphries and stored under the stairs in the Annexe*
- STF39** **Marjorie Bawden**
Notes on local history and photocopies of local material collected in the early 1990s plus notes on the Lawes family, correspondence with I Fleming of Edinburgh on Eleanor Ormerod's portrait and notes on the family of Mary Glynne. The folder also contains Lady Bawden's obituaries, 1994; Sir Frederick Bawden's certificate of election as a member of the New York Academy of Sciences 1959 and his obituary and memorial service address, 1972. *One bundle; records of Sir Frederick Bawden's scientific work are in the archives of the Royal Society.*
- STF40** **Harold Gough**
Reminiscences of Rothamsted 1938 – 41, received 1994, plus second copy printed in the Annals of Applied Biology, spring 2009. *One folder*
- STF41** **J Bennett**
Reminiscences of Rothamsted 1946 – 7, received 1997. *One folder*
- STF42** **JT Martin**
Reminiscences of Rothamsted, 1929 – 51, received 1997. *One folder*

- STF43** **GT Dunkley**
Newspaper and magazine cuttings, pictures and photographs relating to JB Lawes, JH Gilbert and others and to work at Rothamsted, 1854 – 1917. *One large volume*
- STF44** **H Ling Roth**
Notes on agriculture, mainly handwritten but with some photographs and extracts from printed works. *Three bound volumes, one presented to Library by H Ling Roth junior in 1929*
- STF45** **Thomas Wilson**
Notebook from Thos Wilson of Rivers Lodge, 1850s, with personal accounts and notes on currencies, units of measurement, weights and measures. *One notebook, plus later photographs and reminiscences (by Thos Wilson's daughter) of Rivers Lodge*
- STF46** **John Jenkyn**
Notes on Hampden Bomber crash on Woburn Farm, 1941 and memorial to F Rowney and T Barker, September 2010; notes on Denys Morland; photocopies of letters from John Lawes to Evan Pugh and newspaper cutting. *One box*
- STF47** **NW ('Bill') Pirie**
Correspondence with HH Mann on swayback in lambs, 1944; correspondence 1962 with Russell on Pirie's appointment in 1940; letter from H Kay on needs of developing countries, 1964; eight letters received from NW Pirie in 1991, one found in library, 2007.
Material (mostly photographs but also some diagrams) relating to Pirie's work on Leaf Protein (LP). Apart from a miscellaneous set, there are three sets that are labelled in accordance with the labelling on the original files: LP History; Leaf Protein Machinery Photographs 1950s – 1970s; LP Machinery 1950 – 1970, Orig 1950s, Village Units, Air Free Press etc. *There is clear overlap between the sets and some duplication, especially between the first three and the last, but the latter has been kept because most of the photographs in it are mounted (albeit very crudely) and some, but not all, are labelled.*
Also, a notebook labelled Experimental Cooking with Leaf Protein, July 1959; material (mostly photographs) relating to work on viruses (with FC Bawden), including Tobacco Mosaic Virus, Tobacco Necrosis Virus and Bushy Stunt (probably including some early examples); three books by Pirie with author's annotations; two articles thought not to be in the Rothamsted reprint collection; notes etc relating to FC Bawden; a green album (Moore's Modern Methods) containing travel photographs. *The notes on Bawden were probably compiled when Pirie was writing his biographical memoir on him for the Royal Society; it is not certain that all of them relate to Bawden.*

See also **STF48**. Other material relating to Pirie is held by the Royal Society. Five folders, one notebook, one album in one box; two folders, three books in second box; plus a separate diagram

STF48

Stan Pierpoint

Miscellaneous correspondence etc concerning PR (pathogenesis-related) proteins, salicylic acid, a paper on Edward and Edmund Stone, and on the location of the Sheffield University Biochemistry Department; notes on the history of the Biochemistry Department (compiled to mark its 50th anniversary) including photographs, drafts of posters, and a hand-written memoir by Margaret Holden. Also material relating to Bill Pirie, including obituaries and correspondence relating to their preparation and of the Biographical Memoir prepared for the Royal Society; correspondence relating to what was probably Pirie's last paper (not published); correspondence relating to the archiving of Pirie's papers; correspondence relating to the donation of leaf protein equipment to the Science Museum. *Pierpoint worked with Pirie and was also a close personal friend who helped to sort-out Pirie's scientific affairs after his death, which is why this material relating to Pirie, including letters written by him, are archived here rather than under **STF47** (NW Pirie). Three folders, rolled-up poster drafts*

STF49

David Jenkinson

Papers and correspondence relating to Jenkinson's Fellowship of the Royal Society; the preparation of obituaries on George Cooke; a visit to the USA in 1991 (including participation in a workshop on Stabilization and Turnover of Organic Matter in Soil); contributions to a review for the IPCC (Intergovernmental Panel on Climate Change); a research project with KARI (Kenya) on Maintenance of Soil Fertility and Organic matter (jointly with PK Leech); funeral programme and order of service. *Few of Jenkinson's papers have survived at Rothamsted, and, as far as is known, none were donated to other archives. Two folders*

STF50

PH Gregory

Papers relating to work on spore dispersal gradients, 1960s (with some additional, later, material from BDL Fitt). *Two folders*



ROTHAMSTED
RESEARCH

Library & Archives

WOB

Woburn, mid 19th century onwards

Extent and form:	46 boxes, about 60 volumes and binders. Condition fair, some items worn through use and showing previous damp damage; some files in non-archive quality packaging.
Administrative history:	Created at Woburn Experimental Farm
Custodial history:	Transferred to annexe strong room before 1984 and added to since then at irregular intervals by staff members responsible for Woburn.
Accruals:	Unlikely but possible.
Existence of copies:	None known but likely
Related material at Rothamsted:	See FARM , FX and MET
Related material at Rothamsted:	The RASE archives at the Museum of English Rural Life, Reading
	Updated: 12 December 2011

Access and Copyright:

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Woburn Experimental Station was established in 1876 by the Duke of Bedford. It was managed by the Royal Agricultural Society and the first directors were the chemists Augustus Voelcker and his son John Augustus; Lawes was involved with designing the experiments, which originally were to study the effects of different feedstuffs on the value to crops of the resulting farmyard manure. The range of experiments widened and the RAS continued funding the Station until 1921. Rothamsted has managed it since 1936.

The Woburn archives at Rothamsted begin in the late 19th century and are of the general administration, including a long series of correspondence, and of the experimental work. There are also some archives of HH Mann, the agricultural scientist who worked both at Woburn and in India.

Woburn Fruit Farm: in 1894 the Duke of Bedford provided land for Spencer Pickering to carry out experiments on fruit growing and development. The Duke gave up the experiments in 1918 and Spencer Pickering died in 1920. 'The Scientific Work of the late Spencer Pickering' which includes an obituary was published by the Royal Society in 1927. Pickering lived in Harpenden and worked at Rothamsted for a while in the 19th century but the Fruit Farm was not part of the Rothamsted experiments. These archives were in the Annexe strongroom before 1984 but there is no indication why they came there.

WOB1 Administration: general

WOB1.1 Director's (EJ Russell's) reports to the Lawes Agricultural Trust, 1922 – 36. *One folder*

WOB1.2 Inventories, plans and schedules, 1922 – 35. *One folder*

WOB1.3 Inventory and valuation, record of the state of cultivation of the farm, letters and notebook, 1936 – 7. *One bundle*

WOB1.4 Visitors' books, 1894 – 1967. *Four volumes*

WOB1.5 – 9 Extracts from Field Plots Committee and other committee minutes of decisions and information on Woburn experiments, 1950s – 70s. *Five green binders*

WOB2 Administration: correspondence

WOB2.1 Letters on work at Woburn, including a letter from JH Gilbert on buying a soil sampling frame, 1901 – 16. *One folder*

WOB2.2 Letter book, 1917 – 8, with some letters very faint. *One volume*

WOB2.3 Correspondence of JA Voelcker, EJ Russell, RASE, Woburn Park Estate Office and the Ministry of Agriculture, 1920s – 30s. *One folder*

- WOB2.4** Letters identified and probably put together by HH Mann, late 1920s – early 1940s: contracts and estimates for work; electricity supply; enquiries for Woburn information; experimental methods at Woburn; history of Woburn (Dr Voelcker); library and journals at Woburn; meteorological records: rainfall; records of Woburn: general. *Eight folders tied into one bundle*
- WOB2.5** Letters to HH Mann from A Voelcker, EJ Russell, WG Ogg and others on Woburn administration, with some draft replies and reports, 1930s – 50s. *One large bundle*
- WOB2.6** Letters of HH Mann, EJ Russell and JA Voelcker and others on the Hills Trust, a bequest to finance Woburn experiments, 1931 – 7, 1982. *One bundle*
- WOB2.7** Letters of HH Mann and W Barnicot on financial matters, 1936 – 7. *One bundle*
- WOB2.8** Letters to HH Mann from BA Keen and EJ Russell, with draft replies and reports, 1936 – 7. *One bundle*
- WOB2.9** Correspondence of BA Keen and EJ Russell with HE Armstrong, Sir M Burrell, Lord Clinton, Sir JB Farmer and Sir David Prain on Woburn experiments, 1936 – 7. *One bundle*
- WOB2.10** HH Mann's administrative correspondence, with supporting pamphlets, 1940 – 50s. *One large bundle*
- WOB2.11** Letters with results of tests on sick animals at Woburn, 1930s – 50s. *One folder*
- WOB2.12** Correspondence with Nematology Department 1957 – 77. *One bundle*
- WOB2.13** Letters and forms, 1966 – 80, relating to maintenance of oil pipeline, with plan, 1980. *One small bundle*
- WOB3** **Experiments: working papers and results**
- WOB3.1** Experimental sheets: notes and figures from crop and feed experiments, late 1880s – late 1890s. *Seven bundles, one folder*
- WOB3.2** Animal feeding and dung making: day books and notebook for bullock and sheep experiments, 1880s – 1920s. *28 notebooks in two boxes*
- WOB3.3** Permanent barley experiments figures, 1888 – 9. *One notebook*

- WOB 3.4** Permanent wheat and barley experiments figures, 1890. *One notebook*
- WOB3.5** Swede finger and toe experiments figures, 1896 – 1900. *Four notebooks*
- WOB3.6** Field experiments record book, late 19th, early 20th century. *One notebook; plans of field experiments at Rothamsted and Woburn, 1946, 1952 – 9 are stored at FX5*
- WOB3.7** Weed experiment figures, 1899 – 1902, 1911 – 5. *Two notebooks*
- WOB3.8** Pot experiment record book, 1906. *One notebook*
- WOB3.9** Calf rearing and tuberculosis: record books, correspondence, minutes and notes, 1911 – c1920. *One box*
- WOB3.10** Woburn Soils PB (permanent barley), figures from 1927 and 1876. *One notebook*
- WOB3.11** Green manuring experiments: figures, correspondence, notes, pamphlets and extracts from printed works, 1920s – 1940s. *Two boxes*
- WOB3.12** Sewage sludge experiments, W/RN/4, 1940 – 57. This is the world's longest sewage sludge experiment. Johnny Johnston continued work on it from the late 1950s onwards and may have other files. *Five files from Steve McGrath, 2002*
- WOB3.13** Notes and plans for cropping, 1940s to 1970s. *One bundle*
- WOB3.14** Notes, letters and tables on fertilizing, 1960s to 1980s. *One bundle*
- WOB3.15** 'Results book from 1909', 1909 – 20s. *One volume*
- WOB4** **Experiments: correspondence and supporting papers**
- WOB4.1** Artichokes: notes and correspondence on growing artichokes at Woburn, 1957 – 62. *One bundle*
- WOB4.2** Barley pot experiments: figures and correspondence, 1929 – 33. *One folder*
- WOB4.3** British Non-Ferrous Metals Research Association: correspondence relating to metal specimens buried in Lansomes Field for work on corrosion, 1930s – 60s. *One bundle*

- WOB4.4** Broccoli: correspondence, 1935 – 8. *One folder*
- WOB4.5** Carrots: correspondence and notes on 1941 carrot experiments. *One bundle*
- WOB4.6** Clover sickness: correspondence, notes, draft and printed papers, 1930s – 60s. *One bundle*
- WOB4.7** Concentrated organic manures, carrots and kale: correspondence, mainly of Mann and Watson, 1930s. *One bundle*
- WOB4.8.1** Continuous/permanent wheat and barley: various tables, diagrams, letters and reports, 1920s – 50s, in no apparent order but including figures from late 19th century. *Three bundles, one folder*
- WOB4.8.2** Continuous/permanent wheat and barley, computer printouts, data sheets, diagrams, notes and summaries for thesis by MC Igbokwe on nutrient cycles in cereals grown continuously and in rotation on the light sandy loam at Woburn with special reference to nitrogen fertilising, 1977. *Three boxes, three green binders; copy of thesis in Library*
- WOB4.9** Equisetum: correspondence, 1935. *One folder*
- WOB4.10** Fallowing: effect on wheat and barley in very exhausted lands: draft and printed paper, letters on preparation for printing, 1940s with earlier notes. *One bundle*
- WOB4.11** Grass: correspondence, late 1920s, early 1930s. *One folder*
- WOB4.12** Hyganic fertilizer: correspondence, mainly Mann, Brenchley and Watson, report and figures, 1937 – 8. *One bundle*
- WOB4.13** Kale: correspondence, notes and reports from Mann, Russell, Voelcker and Watson, 1932 – 5. *One bundle*
- WOB4.14** Lettuce: notes and reports, 1942 – 3. *One bundle*
- WOB4.15** Linseed: reports and figures, 1948 – 9. *One bundle*
- WOB4.16** Lucerne: correspondence, 1928. *One folder*
- WOB4.17** Leucite: correspondence and figures, late 1920s – 50s. *One folder*

- WOB4.18** Magnesia: notes for paper, 1930s. *One bundle*
- WOB4.19** Millets: correspondence, 1940s, 50s. *One bundle*
- WOB4.20** Plant competition: barley and chickweed, barley and *Agrostis gigantea*, barley and clover, rye grass and clover, correspondence and reports, 1930s – 50s. *Four bundles, tied as one*
- WOB4.21** Potatoes: notes and figures, 1929 – 30, 1950s. *One folder*
- WOB4.22** Pyrethrum: correspondence of Mann, Tattersfield, Watson and CT Gimingham of Ministry of Agriculture, 1933 – 9. *One folder*
- WOB4.23** Radishes and soil texture: correspondence and figures, Mann, Questner, Russell, 1941 – 3. *One folder*
- WOB4.24** Rotation: unexhausted value of cake and corn, Stackyard, 1928 – 36. *One bundle*
- WOB4.25** Soya beans and maize: correspondence, 1930s – 50s. *One large bundle*
- WOB4.26** Spurrey and wild oats: correspondence of Mann, Hubbard, Thurston, with printed papers, 1940s, 50s. *One bundle*
- WOB4.27** Sugar beet manurial and cultivation experiments: reports, diagrams, correspondence of Mann, Cochran, Warren, Watson and Yates, 1930s – mid 1940s; sugar beet seed: Mann's correspondence, reports, papers on manuring for sugar beet seed, 1941 – 5; sugar beet vernalisation: Mann's correspondence on vernalisation of sugar beet seed, 1942 – 4. *One box*
- WOB4.28** Sulphate of ammonia on wheat: correspondence of Mann, Barnes and Watson, with notes and figures, 1934 – 6. *Three bundles*
- WOB4.29** Swayback in lambs: correspondence of Mann and the Ministry of Agriculture with figures and printed papers, late 1940s and 1950s. *One folder*
- WOB4.30** Sweet lupins: correspondence, notes and reports on lupin experiments, 1940s – 50s. *One bundle*
- WOB4.31** Take all and eyespot: correspondence of Mann, Salt and Witts with tables, papers and reports, 1950s. *One bundle*
- WOB4.32** Take all in wheat and barley: correspondence of Mann,

Garrett and Watson with tables and reports, 1940s. *One folder*

WOB5 Farm

Joint records of Rothamsted and Woburn farms are kept with Rothamsted farm records.

WOB5.1.1 – 44 Cultivation or field notebooks, 1882 – 1958. *41 small notebooks and three binders in five boxes*

WOB5.2.1 Farm diaries, 1946, 47, 58 – 77. *27 volumes*

WOB5.2.2 Field plots/field experiments diaries, 1968 – 74. *7 volumes*

WOB5.3 Weights, rainfall and stock tables, 1881 – 6. *One notebook*

WOB5.4 Silo temperatures, 1884 – 9. *One notebook*

WOB5.5 Cropping book, 1887 – 98. *One notebook*

WOB5.6.1, 2 Field weight books, 1897 – 12. *Two notebooks*

WOB5.7 Soil sampling book, late 19th, early 20th century. *One notebook*

WOB5.8 Stackyard Field soil record book, 1898 – 9. *One notebook*

WOB5.9 Implement and equipment lists, 1940s – 80s. *One folder*

WOB5.10 Farm reports, 1946 – 77. *One bundle*

WOB5.11 Soil hardness measurements, undated, probably 1950s. *One notebook*

WOB5.12 Threshing book, 1956 – 7. *One notebook*

WOB5.13 Figures for fertilizer use, 1971 – 80. *One notebook*

WOB5.14 Valuations, 1991. *One notebook*

WOB6 Finance

WOB6.1.1 – 4 Petty cash books, 1918 – 36 (not a continuous series). *Four volumes*

WOB6.2.1 – 7 Cash books, April 1927 – March 1947. *Seven volumes*

WOB6.3.1 – 17 Ledgers, September 1927 – September 1939; October 1940 – September 1941; October 1942 – September 1947. *17 volumes in two boxes*

- WOB6.4** Statements of account, 1922 – 6. *One folder*
- WOB6.5.1, 2** Cash receipts and payments books, October 1948 – September 1951. *Two volumes*
- WOB6.6** Wages book, June 1927 – March 1930. *One volume*
- WOB6.7** Postage book, 1956 – 64. *One volume*
- WOB7** **Fruit farm**
- WOB7.1** Plot descriptions and experiment details, c1894 – c1912. *One large volume*
- WOB7.2** Crop record book, c1895 – c1919. *One large volume*
- WOB7.3.1, 2** Results and notes on experiments, not exclusively fruit experiments, 1895 – c1917. *Two volumes*
- WOB7.4, 1 – 12** Notes and figures on experiments, treatments and results, 1908 – 9. *12 small volumes in box*
- WOB7.5** Cash book, 1912 – 20. *One volume*
- WOB7.6** Wages book, 1916 – 9. *One volume*
- WOB8** **HH Mann**
- WOB8.1** 'Abstracts from Memoirs, Review etc', late 19th century. *One notebook*
- WOB8.2** 'Extracts on various subjects' (political, religious, social), late 19th century. *One notebook*
- WOB8.3** Correspondence from Poona Agricultural College, especially with the Indian Tea Association, 1907 – 9. *One bundle*
- WOB8.4** 'On the Flocculation of Deccan Soils' and 'Flocculation Experiments' c1910. *One folder*
- WOB8.5** Correspondence, notes and reports on work with tea, mainly in Georgia, with photographs of Georgia, and including also correspondence on tea growing in Africa and India, 1929 – 30. *One bundle*
- WOB8.6** Notes on visit to Tanganyika and related printed papers, 1930s. *One bundle*
- WOB8.7** Notebook, originally Mann's, beginning with lists of references to works on agricultural science, probably

compiled about 1915, and continuing with lists of figures in an unidentified hand, 1930s – 1950s. *One volume in poor condition*

- WOB8.8** Obituaries and related notes, 1961 – 3; reminiscences by GV Dyke of Mann and TW Barnes, 1991. *One folder*
- WOB8.9** Samples and drawings of fodder grasses of North India, probably compiled by Mann, early 20th century. *One volume*
- WOB9** **Meteorology**
- WOB9.1.1, 2** Fruit farm meteorological registers, 1895 – 1919. *Two large volumes*
- WOB9.2.1 – 6** Meteorological Observations, 1928 – 67. *Six volumes*
- WOB9.3.1 – 3** Additional Meteorological Observations, 1929 – 67. *Three volumes*
- WOB9.4** Meteorological data, 1967 – 87. *One box*
- WOB9.5** Agricultural meteorological scheme: observers' handbook and correspondence on Woburn's participation, 1929 – 36. *One bundle*
- WOB10** **White books**
- WOB10.1** Woburn white book rotation experiments, 1966 – 77. *One green binder*
- WOB10.2** Woburn white book crop sequence experiments, 1967 – 77. *One green binder*
- WOB10.3** Woburn annuals 1970 – . *One green binder*
- WOB10.4** Woburn Rotations and Crop Sequences 1978 – 87, excluding RN/3. *One green binder*
- WOB10.5** Woburn RN/3 1978 experiments. *One green binder*
- WOB10.6** Woburn RN and CS 1988 – 95. *One green binder*
- WOB10.7** Woburn white book 1998. *One red binder*
- WOB11** **Awards, maps, newspaper cuttings and photographs**
- WOB11.1** Woburn Experimental Station awards from the Franco-British exhibition 1908 and the Turin International Exhibition 1911. *Six items, rolled, some damaged*

- WOB11.2.1** Plans, some blueprints, of Woburn Experimental Farm, based on OS 25" to one mile, 1928 – 48 and undated. *24 plans, stored flat*
- WOB11.2.2** OS maps showing electricity supply, undated, after 1988. *Two plans, rolled*
- WOB11.2.3** Plan of dairy farm one showing soil structure and pipe line, undated, after 1963. *Two plans, rolled*
- WOB11.3 – 6** Photographs of experiments, late 19th – early 20th century, with list of negative numbers. *Three large volumes and one small notebook*
- WOB11.7** Photographs of buildings, experiments, fields and individuals, late 19th and 20th centuries, some including name of photographic studio. *One box*
- WOB12** **Miscellaneous**
- WOB12.1** German diploma awarded to A Voelcker, 1852. *One item in folder ADH 9*
- WOB12.2** Reports on barley, with instructions from Bohemia, 1892, notes on potato experiment, 1892, weights and notes on bullock feeding experiment, 1893 – 4, weekly account of work done in the experimental fields for five weeks in 1894, (originals) and copies of letters, 1876 – 7, and reports, late 1870s, 1920s, *One large envelope, contents probably brought together from the archives of the RASE for display*