

Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED
RESEARCH

Yields of the Field Experiments



[Full Table of Content](#)

Table of Contents and Conventions

Rothamsted Research

Rothamsted Research (2021) *Table of Contents and Conventions ; Yields Of The Field Experiments* , pp i - vi

Results of the Classical and other Long-term Experiments 2019

Contents

Conventions	i
19/R/BK/1 BROADBALK	1
19/R/HB/2 HOOS BARLEY (Hoosfield)	12
19/R/WF/3 WHEAT AND FALLOW (Hoosfield)	19
19/R/EX/4 EXHAUSTION LAND (Hoosfield)	20
19/R/PG/5 PARK GRASS	24
19/R/GC/8 GARDEN CLOVER (Manor Garden)	31
19/W/RN/3 LEY/ARABLE (Stackyard D, Woburn Farm)	32
19/W/RN/12 ORGANIC MANURING (Stackyard B, Woburn Farm)	47
Weather Summaries	52

Results of the Classical and other Long-term Experiments 2019

Conventions

For each experiment the current treatments are shown with the factor and level names which are used in the tables.

For each experiment references are given to previous years. These refer to the '(Numerical) (Results)' previous editions of 'Yields of the Field Experiments'.

For the classical and some long-term experiments reference is made to 'Details' – separate publications, giving full descriptions of treatments until 1977 & 1973, with full titles 'Details of the Classical and Long Term Experiments up to 1977' and 'Details of the Classical and Long Term Experiments up to 1973'.

The following conventions are observed unless otherwise stated.

All areas are in hectares. All plot dimensions are in metres.

All rates of application of fertilizers, sprays etc. are per hectare.

All yields are per hectare.

For any other crop, details of abbreviations are given as necessary

FERTILIZERS

27%N or 34.5% N means nitrogen as calcium ammonium nitrate or ammonium nitrate.

Anhydrous Sulphate of Soda

Chalk

Compost

Double Top 27% nitrogen and 30% SO₃

FYM Farmyard manure (from bullocks)

Headland Manganese 500 500 g/l 27.5% w/w manganese carbonate

Kieserite MgSO₄H₂O 17.7% magnesium and 23.3% sulphur

Maize Tops

Manganese sulphate Mn₂ (SO₄)₃ 27% manganese and 24% sulphur

Magnesium sulphate MgSO₄ H₂O 17.7% magnesium and 23.3% sulphur

Muriate of potash (MOP) 60% K₂O as Potassium Chloride (KCl)

Nitram 34.5% N

Nitraprill 34.5% N

Nitrate of soda NaNO₃ 16% nitrogen and 27% sodium

Results of the Classical and other Long-term Experiments 2019

Nitro-Chalk	Calcium Ammonium Nitrate 27% N
Silicate of soda	Na ₂ SiO ₃ 37% sodium and 23% silica
Sodium Sulphate	35% Sodium
Sulphate of ammonia	(NH ₄) ₂ SO ₄ 21% nitrogen 24% sulphur
Sulphate of potash (SOP)	K ₂ SO ₄ 50% K ₂ O and 18.4% sulphur
Triple superphosphate (TSP)	47% P ₂ O ₅

Cereal straw is removed unless otherwise stated.

GS: Growth Stage.

tm): Tank mix; two or more products applied together.

tr: means seed dressing

PESTICIDES USED

The following list of pesticides is based on The UK Pesticides Guide, CAB International and The British Crop Protection Council. CABI Publishing

KEY TO ABBREVIATIONS

ad Adjuvant	d Desiccant	f Fungicide
gr Growth regulator	h Herbicide	i Insecticide
m Molluscicide	n Nematicide	tr Trace elements

Trade Name	Function	Active ingredient
Ally Max SX	h	metsulfuron-methyl + tribenuron-methyl (14.3:14.3 % w/w)
Aphox	i	pirimicarb (50% w/w)
Artemis	f	fenpropidin + prochloraz + tebuconazole (250:200:100 g/l)
Bassagran	h	(87% w/w) bentazone as the sodium salt
Beret Gold	f	fludioxonil (25 g/l), seed dressing
Bravo 500	f	500g/l Chlorothalonil, 1,2-benzisothiazolin-3-one at 0.01% as a preservative
Buffalo Elite	water conditioner	ammonium sulphate (40 % w/w)
Cello	f	prothioconazole + spiroxamine + tebuconazole (100:250:100 g/l)
Cintac	h	iodosulfuron-methyl-sodium + mesosulfuron-methyl (1.0:3.0% w/w)
Claw 500	f	chlorothalonil (500 g/l)

Results of the Classical and other Long-term Experiments 2019

Clayton Tebuconazole	f	250 g/l tebuconazole in an oil-in-water emulsion
Cogent (Intracrop)	ad	32.67% w/w alkoxyated alcohols and 1.0% w/w trisiloxane organosilicone copolymers
Crawler	h	carbetamide (60% w/w)
Deacon	f	200 g/l (20.0% w/w) tebuconazole
Deter	i	clothianidin (250 g/l); seed dressing
Envoy	f	epoxiconazole + pyraclostrobin (62.5:85 g/l)
Firestorm	h	diflufenican + flufenacet (100:400 g/l)
Hallmark with zeon tech	i	lambda-cyhalothrin (100 g/l)
Hurler	h	fluroxypyr (200 g/l)
Kerb Flo 500	h	500 g/litre (43.86% w/w) propyzamide
Keystone	f	epoxiconazole + isopyrazam (99:125 g/l)
Kingdom	f	boscalid + epoxiconazole (140:50 g/l)
Mobius	f	175 g/L prothioconazole and 150 g/L trifloxystrobin.
Moddus	gr	trinexapac-ethyl (250 g/l)
Pontos	h	100 g/l picolinafen and 240 g/l flufenacet.
Redigo	f	prothioconazole (100 g/l)
Redigo Deter	f	prothioconazole + clothianidin (50:250 g/l)
Redigo Pro	f	prothioconazole + tebuconazole (15:20 g/l)
Refine Max SX	h	67 g/kg metsulfuron-methyl and 333 g/kg thifensulfuron-methyl
Samurai	h	360 g/l glyphosate, present as 441g/l (35.3% w/w) of the potassium salt of glyphosate
San 703	f	375 g/l chlorothalonil and 40 g/l cyproconazole
Simba SX	h	200 g/kg metsulfuronmethyl
Sinconil	f	500 g / l chlorothalonil
Sprinter	h	700g/litre 2,4-D as the dimethylamine and the monomethylamine salts
Starane Hi-Load HL	h	480 g/litre (20.7% w/w) fluroxypyr as the 1-methyl heptyl ester (333 g/litre acid equivalent).
stefes CCC 720	gr	720 g / l chlormequat
Stomp Aqua	h	455 g/l pendimethalin

Results of the Classical and other Long-term Experiments 2019

Velomax	ad	99% Modified vegetable oil, petroleum hydrocarbons, alkyl phenol ethoxlate, 1% constituents ineffective as spray adjuvants
Vortex	f	41.6 g/litre (4 % w/w) epoxiconazole and 41.6 g/litre (4 % w/w) fluxapyroxad and 61 g/litre (5.8 % w/w) pyraclostrobin.
X-Clude	water conditioner	

Machinery Referred to in the Diary Notes

<u>Cultivators</u>	<u>Manufacturer</u>	<u>Width</u>	<u>Description</u>
Plough	Kverneland	1.5 m	5 Furrow, 25 cm Furrows.
Plough	Ransome	1m	3 Furrow, 25cm Furrows
Press	Philip Watkins	4.6m	Used to level and consolidate ground after ploughing
Flexitine	Bunford	3.3 m	Used for lifting Worked ground.
Powerharrow	Kverneland	3.0 m	Used for creating seed bed.
Rotavator	Howard	1.3 m	Mainly used for BK/1 Paths.
Rotavator	Concept	1.2 m	Mainly Used for HB/2 Paths.

<u>Drills</u>	<u>Manufacturer</u>	<u>Width</u>	<u>Description</u>
Accord Combination Drill	Kverneland	3.0 m	Power-harrow Mounted Pneumatic drill with Suffolk coulters 12.5 cm apart.

<u>Chemical Applicators</u>	<u>Manufacturer</u>	<u>Width</u>	<u>Description</u>
Cascade	Horstine	12m	Tractor mounted pneumatic boom fertiliser spreader
Litetrac spreader	Litetrac	12m	Tractor mounted pneumatic boom fertiliser spreader - used for 2018 fertiliser spreading only
Muck Spreader	International	1.5 m	Trailed - FYM Applications.
Exacto-matic	Ransome, Nordsten	3.8 m	Tractor Mounted - Fert Applications.
Sprayer	Knight	24 m	Tractor Mounted - Chemical Application.
Quickpass	Yr-Crop	1.5 m	Trailed - Fert Applications.
Lowsread	Lowsread	2.76 m	Tractor Mounted - Fert Applications.

Results of the Classical and other Long-term Experiments 2019

<u>Harvesters</u>	<u>Manufacturer</u>	<u>Width</u>	<u>Description</u>
Tucano	Claas	6 m	Commercial Combine used for harvesting discards after plot yields.
Box Mower	Wilder	1.01 m	Box Mower Mainly used for yields on PG/5.
Mower	Unifarm	1.83 m	Commercial Mower used to mow discards on PG/5.
Plot Combine	Haldrup	2m Cut	Cereal Plot Combine Harvester (used 2017 Onward).
<u>Other</u>	<u>Manufacturer</u>	<u>Width</u>	<u>Description</u>
Ring Rolls	Flexicoil	6m	Ring rolls for covering seed post drilling.
Topper 9	McConnell	2.72 m	Topper used for topping stubbles and grass areas.
Small Topper	Kilworth	1.1 m	Topper used with Iseki Tractor - Used for cutting Paths.
945 Conventional Baler	New Holland	-	Traditional Baler Used for baling straw samples.
Round Baler	Claas	-	Used for clearing unwanted leftover straw/grass from experiments.
<u>Tractors</u>	<u>Manufacturer</u>	<u>Weight</u>	<u>Description</u>
T7210	New Holland	8.1 t	Main cultivations tractor.
TL6030 Elite	New Holland	5.5 t	Sprayer tractor.
6830	John Deere	5.6 t	Drill and fertiliser application tractor.
TH4335	Iseki	1.1 t	Paths cutting tractor.
T503	Tym	2.0 t	Fertiliser applications and Rotovating.

Application code: This is used to identify the kind of application

a = application (cultivations, harvest, etc.), p = pesticide, f = fertilizer and s = seed.