ROTHAMSTED RESEARCH

Yields of the Field Experiments 2015

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R/BK/1 Broadbalk

Rothamsted Research

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BROADBALK

Object: To study the effects of organic manures and inorganic fertilisers on continuous w. wheat and wheat in rotation. From 1968 two three-year rotations were included: potatoes, beans, w. wheat and fallow, w. wheat, w. wheat. In 1979 the first rotation was changed to fallow, potatoes, w. wheat. In 1980 the second rotation reverted to continuous w. wheat. Since 1985 part of the second rotation was added to the first to extend the rotation to fallow, potatoes, w. wheat, w. wheat, w. wheat. In 1996 the fallow was replaced by w. oats and potatoes replaced by maize in 1997.
The 172nd year, w. wheat, w. oats and forage maize.
For previous years see 'Details' 1967 and 1973, Station Report for 1966, pp. 229-231; Station Report for 1968, Part 2; Station Report for 1982, Part 2, pp 5-44 and Yield Books for 74-14/R/BK/1.

Areas harvested[a]:

	Section	
Wheat:	0	0.00320
	1	0.00589
	2,3,7 and 6	0.00487
	9	0.00512
Oats:	5	0.00487
Maize:	4	0.00162

[a] Harvest areas in the 2007-2010 yield books were incorrectly assigned, but yields were correct.

Treatments:
In 2001 a number of the treatments were changed. The treatments are now:-
Whole plots

PLOT	Fertilizers and organic manures Treatments Plot	From 2001
01 (FYM)N4	01	N4
21FYMN3	2.1	FYM N2 (1)
22FYM	2.2	FYM
03Nil	03	None
05(P)KMg	05	(P) K Mg
06N1 (P) KMg	06	N1 (P) K Mg
07N2(P)KMg	07	N2 (P) K Mg
08N3(P)KMg	08	N3 (P) K Mg
09N4(P)KMg	09	N4 (P) K Mg
10N4	10	N4
11N4PMg	11	N4 P Mg
12N1+3+1(P)K2Mg2	12	N1+3+1 (P) K2 Mg2 (2)
13N4PK	13	N4 P K
14N4PK*(Mg*)	14	N4 P K* (Mg*)
15N5(P)KMg	15	N5 (P) K Mg
16N6(P)KMg	16	N6 (P) K Mg
17N1+4+1PKMg	17	N1+4+1 P K Mg
18N1+2+1PKMg	18	N1+2+1 P K Mg
19N1+1+1KMg	19	N1+1+1 K Mg
20N4KMg	20	N4 K Mg

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(1) FYM N3 since 2005
(2) N1+3+1 (P) KMg since 2006

W. oats; Nitrogen and farmyard manure were not applied.

N1, N2, N3, N4, N5, N6: 48, 96, 144, 192, 240, 288 kg N as 33.5% N; to be applied at the same time as the second dressings in the split nitrogen plots for wheat and to the seedbed for forage maize.

Split N to wheat

N1+1+1, 1+2+1 etc: Rates as above. Timings: first two weeks of March, GS31 or mid-April (whichever comes first) and GS37/mid-May.

Split N to forage maize

N2+1, 2+2, 2+3,2+4: Rates as above. Timings: to the seedbed and post-emergence.
P: 35 kg P as triple superphosphate
(P): (none since 2001), to be reviewed in 2015/16.
K: 90 kg K as potassium sulphate.
K2: 180 kg K as potassium sulphate (plus 450 kg K autumn 2000 only)
K*: 90 kg K as potassium chloride
Mg: 12 kg Mg as kieserite.
Mg2: 24 kg Mg as kieserite.(plus 60kg Mg, autumn 2000 only).
(Mg*): (none since 2001), to be reviewed in 2015/16
FYM: Farmyard manure at 35 t

Previous treatment:-
Whole plots

PLOT		Fertilizers and organic manures:-		
	Plot	Treatments until 1967	Treatments from 1968	Treatments from 1985 – 2000
01DN4PK	01	-	D N2 P K	D N4 P K
21DN2	21	D	D N2	D N2
22D	22	D	D	D
030	03	None	None	None
05F	05	P K Na Mg	P K (Na) Mg	PK Mg
06N1F	06	N1 P K Na Mg	N1 P K (Na) Mg	N1 P K Mg
07N2F	07	N2 P K Na Mg	N2 P K (Na) Mg	N2 P K Mg
08N3F	08	N3 P K Na Mg	N3 P K (Na) Mg	N3 P K Mg
09N4F	09	N*1 P K Na Mg	N4 P K (Na) Mg	N4 P K Mg
10N2	10	N2	N2	N2
11N2P	11	N2 P	N2 P	N2 P
12N2PNA	12	N2 P Na	N2 P Na	N2 P Na
13N2PK	13	N2 P K	N2 P K	N2 P K
14N2PKMG	14	N2 P Mg	N2 P K Mg	N2 P K Mg
15N5F	15	N2 P K Na Mg	N3 P K(Na) Mg	N5 P K Mg
16N6F	16	N*2 P K Na Mg	N2 P K (Na) Mg	N6 P K Mg
17N1+3FH	17	N2 (A)	N2 ½[P K (Na) Mg]	N1+3 ½[P K Mg] (A)+
18N0+3FH	18	P K Na Mg (A)	N2 ½[P K (Na) Mg]	N0+3 ½[P K Mg] (A)+
19(C)	19	C	C	(C) (since 1989)
20N2KMG	20	N2 K Na Mg	N2 K (Na) Mg	N2 K Mg

(A) Alternating each year

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+ This change since 1980. Treatments shown are those to w.wheat; autumn N alternates. Maize received N3 ½[PK Mg] on both plots 17 and 18. These treatments shown incorrectly in 1999-2002 Yield books.
W. oats; Nitrogen and dung were not applied.

N1, N2, N3, N4, N5, N6:	48, 96, 144, 192, 240, 288 kg N as sulphate of ammonia until 1967, except N* which was nitrate of soda. All as 'Nitro-Chalk' in spring from 1968 to 1985, as 34.5% N since 1986.
N0+3; N1+3:	None in autumn + 144 kg N in spring; 48 kg N in autumn + 144 kg N in spring.
P:	35 kg P as triple superphosphate in 1974 and since 1988, single superphosphate in other years
K:	90 kg K as sulphate of potash
Na:	55 kg Na as sulphate of soda
(Na):	16 kg Na as sulphate of soda until 1973
Mg:	30kg Mg annually to Plot 14 (applied at 26 kg 1990 to 2000), 35 kg Mg every third year to other plots since 1974 (applied at 30 kg in 1991, 1994, 1997 and 2000 and at 15 kg on half rate treatments). All as kieserite since 1974, previously as sulphate of magnesia annually.
D:	Farmyard manure at 35 t
(C):	Castor meal to supply 96 kg N until 1988, none since
F:	Full rate P K (Na) Mg as above
H:	Half rate of above.

Strips of sub-plots: Until 1967 wheat alone was grown on the experiment, with some bare fallowing. From 1968, the experiment was divided into 10 sections with the following cropping:-

SECTION

Section	1	9	0*	8+	6**	5	3	7	4	2
Year										
1968	W	W	W	W	F	W	W	P	W	BE
1969	W	W	W	W	W	F	W	BE	P	W
1970	W	W	W	W	W	W	F	W	BE	P
1971	W	W	W	W	F	W	W	P	W	BE
1972	W	W	W	F	W	F	W	BE	P	W
1973	W	W	W	W	W	W	F	W	BE	P
1974	W	W	W	W	F	W	W	P	W	BE
1975	W	W	W	W	W	F	W	BE	P	W
1976	W	W	W	W	W	W	F	W	BE	P
1977	W	W	W	W	F	W	W	P	W	BE
1978	W	W	W	W	W	F	W	BE	P	W
1979	W	W	W	W	W	W	F	W	P	F
1980	W	W	W	W	W	W	W	F	W	P
1981	W	W	W	F	W	W	W	P	F	W
1982	W	W	W	W	W	W	W	W	P	F
1983	W	W	W	W	W	W	W	F	W	P
1984	W	W	W	W	W	W	W	P	F	W
1985	W	W	W	W	W	F	W	W	P	W
1986	W	W	W	W	W	P	F	W	W	W
1987	W	W	W	W	W	W	P	W	W	F
1988	W	W	W	F	W	W	W	F	W	P
1989	W	W	W	W	W	W	W	P	F	W
1990	W	W	W	W	W	F	W	W	P	W

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Section	1	9	0*	8+	6**	5	3	7	4	2
Year										
1991	W	W	W	W	W	P	F	W	W	W
1992	W	W	W	W	W	W	P	W	W	F
1993	W	W	W	W	W	W	W	F	W	P
1994	W	W	W	F	W	W	W	P	F	W
1995	W	W	W	W	W	F	W	W	P	W
1996	W	W	W	W	W	P	O	W	W	W
1997	W	W	W	W	W	W	M	W	W	O
1998	W	W	W	W	W	W	W	O	W	M
1999	W	W	W	W	W	W	W	M	O	W
2000	W	W	W	W	W	O	W	W	M	W
2001	W	W	W	F	W	M	O	W	W	W
2002	W	W	W	W	W	W	M	W	W	O
2003	W	W	F	W	W	W	W	O	W	M
2004	W	W	F	W	W	W	W	M	O	W
2005	W	W	W	W	W	O	W	W	M	W
2006	W	W	W	W	W	M	O	W	W	W
2007	W	W	W	W	W	W	M	W	W	O
2008	W	W	W	F	W	W	W	O	W	M
2009	W	W	W	W	W	W	W	M	O	W
2010	W	W	W	W	W	O	W	W	M	W
2011	W	W	W	W	W	M	O	W	W	W
2012	W	W	W	W	W	W	M	W	W	O
2013	W	W	W	W	W	W	W	O	W	M
2014	W	W	W	W	W	W	W	M	O	W
2015[++]	W	W	W	F	W	O	W	W	M	W

W = w. wheat, O = w. oats (spring oats 2001), P = potatoes, BE = s. beans, F = fallow, M = forage maize

* Straw incorporated since autumn 1986. ** No sprays except weedkillers since 1985.

+ No weedkillers.

[++] Spring Wheat in 2015

NOTES:

(1) For a fuller record of treatments see 'Details' etc.

(2) From autumn 1975 to autumn 1986, chalk was applied at 2.9t each autumn to all plots in sets of Sections on a three-year cycle. Year 1: Sections 1, 2, 3. Year 2: Sections 6, 7, 8, 9. Year 3: Sections 0, 4, 5. From autumn 1988 until autumn 1992 a five-year cycle was used. Year 1: Sections 1, 3. Year 2: Sections 2, 8. Year 3: Sections 7, 9. Year 4: Sections 4, 6. Year 5: Sections 0, 5 (omitted). No chalk was applied after autumn 1991 until autumn 2007 when differential amounts were applied to selected plots (see "Results 2008").

(3) In 2003 and 2004 section 0 was used for an experiment (CS/595) investigating different herbicides to control *Equisetum arvense*.

(4) In 2013 the wheat variety changed from Hereward to Crusoe, but it was sown very late (22nd February 2013) because of the very wet autumn and winter of 2012-13.

(5) Spring wheat (var Mulika) and winter oats (var Gerald) were sown in March 2015, instead of in autumn/winter 2014, because the very wet soil conditions in autumn 2014 prevented sowing of a winter crop. The whole site was spring-tine cultivated in March 2015 instead of being ploughed. Section 8 was left in bare fallow and had two in-season cultivations (inversion ploughing) to control weeds.

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Experimental Diary:

Date		Application	Rate	Units
All Sections				
05-Sep-14	p	Sprayed Weedazol to sections 1, 2, 3, 4, 5, 6 + 9 only	20	l/ha
02-Oct-14	f	Applied TSP - strips 11, 13, 14, 17 + 18 all sections	171	kg/ha
02-Oct-14	f	Applied MOP Fertiliser - strip 14, all sections	181	kg/ha
03-Oct-14	f	Applied FYM to plots 2.20-2.29 and 2.10-2.19 - Not Section 5	35	t/ha
06-Nov-14	p	Sprayed Firebrand - strips 2.20 + 2.10 only	1	l/ha
06-Nov-14	p	Sprayed Samurai - strips 2.20 + 2.10 only	3	l/ha
05-Mar-15	p	Sprayed Samurai - not section 8	2.5	l/ha
05-Mar-15	p	Sprayed Firebrand - not section 8	1	l/ha
06-Mar-15	a	Spring-tine Cultivated all site		
16-Apr-15	f	Applied Kieserite Fertiliser - to strips 5, 6, 7, 8, 9, 11, 12, 15, 16, 17, 18, 19 + 20, all sections	80	kg/ha
16-Apr-15	f	Applied SOP - to strips 5, 6, 7, 8, 9, 12, 13, 15, 16, 17, 18, 19 + 20, all sections	217	kg/ha
13-May-15	p	Sprayed BASF Chloremquat 750 - all sections - not sections 4, 6 or 8	2	l/ha
13-May-15	p	Sprayed Kingdom - all sections - not sections 4, 6 or 8	1.5	l/ha
13-May-15	p	Sprayed Foundation - all sections - not sections 4, 6 or 8	1.25	l/ha
13-May-15	a	Topped commercial Grass	-	-
01-Jun-15	a	topping all grass	-	-
11-Jun-15	a	Cut Paths across plots.	-	-
12-Jun-15	a	Rotavated Strip Paths	-	-
15-Jun-15	a	Rotavating paths and fallows around trials	-	-
16-Jun-15	a	Rotavated Paths up strip paths only	-	-
16-Jul-15	a	Pulled 91 wild oats from plots and surrounds	-	-
28-Jul-15	a	Cut cross paths	-	-
13-Aug-15	a	Cut Cross Paths	-	-
S Wheat				
09/03/2015	s	Drilled all wheat plots with Spring Wheat var. Mulika trt Redigo - Sections 0, 1, 2, 3, 6, 7, + 9 only	350	seeds/m^2
09/03/2015	a	Rolled all new drilling on site		
09/04/2015	f	applied Nitram @ 35%N - To strips 12, 17, 18, 19 but not in sections in 4, 5 or 8	139	kg/ha
17/04/2015	f	Applied Nitram @ 34.5%N - To strips 6 and 19 - not sections in 4, 5 or 8	139	kg/ha
17/04/2015	f	Applied Nitram @ 34.5%N - To strips 7 and 18 - not sections in 4, 5 or 8	278	kg/ha
17/04/2015	f	Applied Nitram @ 34.5%N - To strips 8 and 12 - not sections in 4, 5 or 8	417	kg/ha

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17/04/2015	f	Applied Nitram @ 34.5%N - To strips 1, 9, 10, 11, 13, 14, 17, 20 - not sections in 4, 5 or 8	556	kg/ha
17/04/2015	f	Applied Nitram @ 34.5%N - To strip 15 - not sections in 4, 5 or 8	696	kg/ha
17/04/2015	f	Applied Nitram @ 34.5%N - To strip 16 - not sections in 4, 5 or 8	835	kg/ha
08/05/2015	f	Applied Nitram @34.5%N - strips 12, 17, 18 + 19 - not sections 4, 5 or 8	139	kg/ha
13/05/2015	p	Sprayed BASF Chloremquat 750 - section 6 only	2	l/ha
13/05/2015	p	Sprayed Foundation - section 6 only	1.25	l/ha
13/05/2015	p	Sprayed BASF Chloromquat 750 - sections 0, 1, 2, 3, 5, 7 + 9	2	l/ha
13/05/2015	p	Sprayed Kingdom - sections 0, 1, 2, 3, 5, 7 + 9	1.25	l/ha
13/05/2015	p	Sprayed Foundation - sections 0, 1, 2, 3, 5, 7 + 9	1.25	l/ha
13/05/2015	p	Sprayed BASF Chlormequat 750 - section 6 only	2	l/ha
13/05/2015	p	Sprayed Foundation - section 6 only	1.25	l/ha
21/05/2015	p	Sprayed BASF 3C Chlormequat 750 - Western End of plot 109	2	l/ha
21/05/2015	p	Sprayed Kingdom - Western End of plot 109	1.5	l/ha
16/06/2015	p	Sprayed Ally Max - sections, 0, 1, 2, 3, 5, 7 + 9	30	gms/ha
16/06/2015	p	Sprayed Capalo - sections, 0, 1, 2, 3, 5, 7 + 9	1	l/ha
16/06/2015	p	Sprayed Gemstone - sections, 0, 1, 2, 3, 5, 7 + 9	120	ml/ha
16/06/2015	p	Sprayed Jenton - sections, 0, 1, 2, 3, 5, 7 + 9	100	ml/ha
16/06/2015	p	Sprayed Ally Max - section 6 only	30	gms/ha
07/09/2015	a	Harvested All Commercial WW	-	-
09/09/2015	a	Removed Bales from commercial area	-	-
17/09/2015	a	removed round bales from field	-	-
26/09/2015	a	Harvested all WW Plots	-	-
26/09/2015	a	Sampled Baled and Weighed and removed	-	-
26/09/2015	a	Harvested ALL left over Wheat - Swathed all straw to be removed, only Section 0 Chopped Straw onto plots	-	-
28/09/2015	a	Baled and removed all straw swaths	-	-

S Oats

09/03/2015	s	Combination Drilled Winter Oats var. Gerald trt Beret Multi - Section 5 only	350	seeds/m^2
09/03/2015	a	Rolled all new drilling on site	-	-
25/09/2015	a	Harvested all Oat plots	-	-

Maize

14/04/2015	a	Powerharrow Cultivated - Section 4 only		
15/04/2015	s	Drilled Maize var. Severus trt measural - Section 4 only	10.2	seeds/m^2
08/05/2015	f	Applied Nitram @ 34.5%N - To strips 6 and 19 - section 4 only	139	kg/ha
08/05/2015	f	Applied Nitram @ 34.5%N - To strips 7 and 18 - section 4 only	278	kg/ha
08/05/2015	f	Applied Nitram @ 34.5%N - To strips 8 and 12 - section 4 only	417	kg/ha
08/05/2015	f	Applied Nitram @ 34.5%N - To strips 1, 9, 10, 11, 13, 14, 17, 20 - section 4 only	556	kg/ha

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08/05/2015	f	Applied Nitram @ 34.5%N - To strip 15 - section 4 only	696	kg/ha
08/05/2015	f	Applied Nitram @ 34.5%N - To strip 16 - section 4 only	835	kg/ha
22/05/2015	f	Applied Nitram @ 34.5%N - plot 194	139	kg/ha
22/05/2015	f	Applied Nitram @ 34.5%N - plot 184	278	kg/ha
22/05/2015	f	Applied Nitram @ 34.5%N - plot 174	556	kg/ha
22/05/2015	f	Applied Nitram @ 34.5%N - plot 124	417	kg/ha
17/06/2015	a	Sprayed Samson Extra - section 4 only	500	ml/ha
17/06/2015	a	Sprayed Samson Callisto - section 4 only	750	ml/ha
21/09/2015	a	Harvested all Maize Plots for yield by Hand	-	-
29/09/2015	a	Harvested all maize and removed	-	-
29/09/2015	a	removed bales from field - all bales	-	-
30-Sep-14	a	Harvested and removed all leftover Maize - from maize plots only.	-	-

Fallows

21/04/2015	a	Powerharrow Cultivated - Section 8 only
13/05/2015	a	Ploughed - section 8 only (thrown northwards)
17/06/2015	a	Rotavated all Fallows
10/07/2015	a	Ploughed - section 8 only (thrown southwards)
31/07/2015	a	Powerharrowed - section 8 only

Wilderness

19/03/2015	a	Cut back field edge side of south block to make room for tractors on Broadbalk
13/05/2015	a	Topped commercial Grass
28/05/2015	a	Cut middle grass section
26/06/2015	a	topped all short grass
27/07/2015	a	Tidied fallen tree all cuttings placed back into section.
25/08/2015	a	Cut centre plot
21/12/2015	a	Topped All

NOTE: Samples of grain and straw were taken for chemical analysis. Unground grain and straw samples from selected treatments were archived.

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WHEAT

GRAIN TONNES/HECTARE

***** Tables of means *****

SECTION PLOT	7/W1	2/W2	3/W3	6/W38	0/W11	1/W49	9/W57	Mean
01(FYM)N4	7.41	8.02	7.94	6.39	*	*	*	7.44
21FYMN3	8.14	8.15	7.71	6.95	6.10	6.75	5.48	7.04
22FYM	6.59	7.30	6.89	7.46	4.86	6.55	6.19	6.55
03Nil	1.76	0.92	0.93	1.60	1.27	1.45	0.97	1.27
05(P)KMg	1.23	1.00	1.13	1.73	1.34	1.58	1.35	1.34
06N1(P)KMg	3.37	3.25	3.05	3.30	3.07	3.47	3.30	3.26
07N2(P)KMg	5.40	4.96	4.62	4.95	4.67	5.08	4.62	4.90
08N3(P)KMg	6.97	6.59	6.05	6.37	5.26	6.05	5.46	6.11
09N4(P)KMg	7.46	6.59	6.42	7.32	5.70	6.34	6.38	6.60
10N4	5.44	4.61	3.91	3.34	2.84	4.11	2.62	3.84
11N4PMg	4.86	4.99	3.74	4.59	5.53	4.90	3.48	4.59
12N1+3+1(P)KMg	7.77	7.58	7.42	7.23	6.22	6.59	6.20	7.00
13N4PK	7.36	6.94	6.36	7.14	5.47	5.41	5.46	6.30
14N4PK*(Mg*)	7.87	6.88	7.07	7.79	6.16	7.01	5.85	6.95
15N5(P)KMg	7.75	6.87	6.42	6.66	5.50	5.81	4.65	6.24
16N6(P)KMg	7.31	7.17	7.14	7.55	6.27	5.45	5.61	6.64
17N1+4+1PKMg	7.71	7.53	7.26	7.78	6.10	6.63	6.11	7.02
18N1+2+1PKMg	7.94	7.37	6.56	7.41	6.62	6.79	5.05	6.82
19N1+1+1KMg	7.47	6.07	5.21	6.10	5.90	5.91	4.90	5.94
20N4KMg	*	*	*	*	2.93	1.24	*	2.08
Mean	6.31	5.94	5.57	5.88	4.83	5.11	4.65	5.48

GRAIN MEAN DM% 83.0

STRAW TONNES/HECTARE

***** Tables of means *****

SECTION PLOT	7/W1	2/W2	3/W3	6/W38	0/W11	1/W49	9/W57	Mean
01(FYM)N4	3.66	*	*	*	*	*	*	3.66
21FYMN3	4.73	*	*	*	*	4.22	*	4.48
22FYM	3.47	*	*	*	*	3.11	*	3.29
03Nil	0.47	*	*	*	*	0.69	*	0.58
05(P)KMg	0.11	*	*	*	*	0.60	*	0.36
06N1(P)KMg	1.25	*	*	*	*	1.56	*	1.41
07N2(P)KMg	2.09	*	*	*	*	2.50	*	2.29
08N3(P)KMg	3.09	*	*	*	*	3.33	*	3.21
09N4(P)KMg	3.81	*	*	*	*	3.53	*	3.67
10N4	1.64	*	*	*	*	1.38	*	1.51
11N4PMg	1.60	*	*	*	*	1.82	*	1.71
12N1+3+1(P)KMg	3.97	*	*	*	*	3.40	*	3.68
13N4PK	3.61	*	*	*	*	3.36	*	3.48
14N4PK*(Mg*)	3.70	*	*	*	*	2.91	*	3.31
15N5(P)KMg	3.82	*	*	*	*	2.76	*	3.29
16N6(P)KMg	3.45	*	*	*	*	2.93	*	3.19
17N1+4+1PKMg	3.84	*	*	*	*	3.29	*	3.56
18N1+2+1PKMg	4.37	*	*	*	*	3.67	*	4.02
19N1+1+1KMg	3.16	*	*	*	*	2.70	*	2.93
20N4KMg	*	*	*	*	*	0.54	*	0.54
Mean	2.94	*	*	*	*	2.54	*	2.74

STRAW MEAN DM% 88.1

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OATS

TONNES/HECTARE (85% DM)

***** Tables of means *****

Plot	Treatment	GRAIN	STRAW
15	01(FYM)[N4]	5.74	3.27
215	21[FYMN3]	7.55	4.03
225	22[FYM]	7.82	3.98
35	03Nil	2.20	1.09
55	05(P)KMg	2.38	1.22
65	06[N1](P)KMg	2.76	1.10
75	07[N2](P)KMg	2.40	1.17
85	08[N3](P)KMg	3.03	1.32
95	09[N4](P)KMg	3.61	1.89
105	10[N4]	4.10	2.15
115	11[N4]PMg	3.98	2.02
125	12[N1+3+1](P)KMg	4.29	1.77
135	13[N4]PK	4.03	1.83
145	14[N4]PK*(Mg*)	4.75	1.78
155	15[N5](P)KMg	4.77	2.10
165	16[N6](P)KMg	5.27	2.38
175	17[N1+4+1]PKMg	4.70	2.53
185	18[N1+2+1]PKMg	3.82	1.82
195	19[N1+1+1]KMg	3.56	1.71
	MEAN	4.25	2.06

PLOT AREA HARVESTED 0.00487

MAIZE

TONNES/HECTARE (100% DM)

ERRATUM
see 2016 page16 (supplied)

***** Tables of means *****

Plot	Treatment	Whole Crop
14	01(FYM)N4	16.69
214	21FYMN3	19.38
224	22FYM	14.14
34	03Nil	3.06
54	05(P)KMg	4.73
64	06N1(P)KMg	8.31
74	07N2(P)KMg	10.36
84	08N3(P)KMg	12.66
94	09N4(P)KMg	11.80
104	10N4	3.31
114	11N4PMg	9.00
124	12N2+3(P)KMg	17.08
134	13N4PK	17.49
144	14N4PK*(Mg*)	16.88
154	15N5(P)KMg	15.34
164	16N6(P)KMg	16.54
174	17N2+4PKMg	14.41
184	18N2+2PKMg	13.93
194	19N2+1KMg	5.95
	MEAN	12.16

PLOT AREA HARVESTED 0.00162

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Maize Yields (100% DM) shown in previous yield books (2009-2015) were found to be in error because an increase in the crop row spacing from 0.6m to 0.7m was not accounted for.
The corrected yields are given below:

Year	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*
Treatment/ Section	*7*	*4*	*5*	*3*	*2*	*7*	*4*
01(FYM)N4	11.81	14.37	8.67	14.32	3.51	13.30	14.31
21FYMN3	13.84	15.32	9.26	18.24	6.65	15.46	16.61
22FYM	12.37	12.78	11.95	11.21	8.75	15.87	12.12
03Nil	0.58	1.73	1.49	1.65	1.34	1.45	2.63
05(P)KMg	5.20	3.82	2.86	3.56	3.32	4.25	4.05
06N1(P)KMg	7.12	6.82	5.05	5.75	5.90	7.77	7.13
07N2(P)KMg	8.51	9.67	7.90	8.85	4.48	9.87	8.88
08N3(P)KMg	8.25	10.15	5.27	10.85	6.14	8.57	10.85
09N4(P)KMg	8.34	10.10	5.83	10.16	4.52	8.96	10.12
10N4	0.94	2.15	1.09	0.96	2.07	2.79	2.83
11N4PMg	5.19	6.97	3.88	5.44	4.36	4.36	7.71
12N2+3(P)KMg	8.55	12.42	7.32	9.33	6.52	11.11	14.64
13N4PK	8.89	11.21	7.20	10.72	8.80	9.58	15.00
14N4PK*(Mg*)	8.76	11.69	7.01	9.82	9.52	11.33	14.47
15N5(P)KMg	7.82	12.19	5.63	9.94	7.03	10.06	13.15
16N6(P)KMg	7.40	10.93	4.33	9.13	6.57	8.59	14.18
17N2+4PKMg	8.18	10.52	5.19	9.13	3.46	8.99	12.35
18N2+2PKMg	8.45	9.85	5.88	11.46	5.95	8.98	11.94
19N2+1KMg	3.49	4.28	2.56	5.43	3.10	4.53	5.10
Mean	7.56	9.31	5.70	8.73	5.37	8.73	10.42
Mean DM%	20.90	29.50	18.80	25.90	25.10	29.80	23.20
Plot Area Harvested	0.00189						

Note: In 2013 herbicide was applied accidentally to maize. Consequently, the maize yields given above for 2013 are unreliable.

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SECTION 8: CLEAN GRAIN (2-3.5mm), TONNES/HA AFTER REMOVING WEED SEEDS.

YEAR	2012	2013	2014
SECTION	8/W4	8/W5	8/W6
PLOT			
2.1 FYMN3	0.63	3.28	2.85
2.2 FYM	0.59	2.71	1.76
03 Nil	0.71	1.53	0.87
05 (P)KMg	0.46	2.42	0.84
06 N1(P)KMg	0.52	3.29	0.83
07 N2(P)KMg	1.08	3.44	0.81
08 N3(P)KMg	1.28	3.40	0.71
09 N4(P)KMg	1.46	3.14	0.65
10 N4	0.46	1.33	1.42
11 N4PMg	0.43	2.27	1.48
12 N1+3+1(P)K2Mg2	0.85	3.38	1.57
13 N4PK	1.43	1.72	1.37
14 N4PK*(Mg*)	1.02	2.36	3.10
15 N5(P)KMg	0.63	4.40	1.22
16 N6(P)KMg	0.34	3.50	2.41
17 N1+4+1PKMg	0.63	4.40	0.85
18 N1+2+1PKMg	0.70	3.14	1.91
19 N1+1+1KMg	1.10	1.03	0.72

Note: Clean grain yields reported here for 2012 & 2013 are about 5% less than those reported in the 2013 yield book because they exclude small (<2mm) grains. In future, all clean grain yields for section 8 will be reported for the 2-3.5mm grain size fraction, excluding grain <2mm, as was the practice prior to 2012. No yields are reported in 2015 because Section 8 was left in bare fallow to control weeds.

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