

Broadbalk Fertiliser and organic manure treatments

Strip	Treatments until 1967	Treatments from 1968	Treatments from 1985	Treatments from 2001	Treatments from 2006
01	-	FYM N2 PK	FYM N4 PK	(FYM) N4	(FYM) N4
2.1	FYM since 1885	FYM N2	FYM N2	FYM N2	FYM N3(since 2005)
2.2	FYM	FYM	FYM	FYM	FYM
03	Nil	Nil	Nil	Nil	Nil
05	PKNaMg	PK(Na)Mg	PKMg	(P)KMg	(P)KMg
06	N1 PKNaMg	N1 PK(Na)Mg	N1 PKMg	N1 (P)KMg	N1 (P)KMg
07	N2 PKNaMg	N2 PK(Na)Mg	N2 PKMg	N2 (P)KMg	N2 (P)KMg
08	N3 PKNaMg	N3 PK(Na)Mg	N3 PKMg	N3 (P)KMg	N3 (P)KMg
09	N*1 PKNaMg	N4 PK(Na)Mg	N4 PKMg	N4 (P)KMg	N4 (P)KMg
10	N2	N2	N2	N4	N4
11	N2 P	N2 P	N2 P	N4 PMg	N4 PMg
12	N2 PNa	N2 PNa	N2 PNa	N1+3+1 (P)K2Mg2	N1+3+1 (P)KMg
13	N2 PK	N2 PK	N2 PK	N4 PK	N4 PK
14	N2 PMg*	N2 PKMg*	N2 PKMg*	N4 PK*(Mg*)	N4 PK*(Mg*)
15	N2 PKNaMg	N3 PK(Na)Mg	N5 PKMg	N5 (P)KMg	N5 (P)KMg
16	N*2 PKNaMg	N2 PK(Na)Mg	N6 PKMg	N6 (P)KMg	N6 (P)KMg
17	N2(A)	N2 1/2[PK(Na)Mg]	N0+3 1/2[PKMg](A)	N1+4+1 PKMg	N1+4+1 PKMg
18	PKNaMg(A)	N2 1/2[PK(Na)Mg]	N1+3 1/2[PKMg](A)	N1+2+1 PKMg	N1+2+1 PKMg
19	C	C	(C)	N1+1+1 KMg	N1+1+1 KMg
20	N2 KNaMg	N2 K(Na)Mg	N2 KMg	N4 KMg	N4 KMg

(A) Treatment to strips 17 & 18 alternating each year. From 1968 both strips received N2 and half-rate PK(Na)Mg; from 1980 wheat on strips 17 & 18 received N1+3 ie autumn N1 in alternate years plus N3 in spring. Maize did not receive autumn N

Annual treatment per hectare

FYM : Farmyard manure (from cattle) at 35t	N as single applications:
(FYM) : Farmyard manure at 35t 1968-2000 only	N1,N2,N3,N4,N5,N6 : 48,96,144,192,240,288 kgN
P : 35kgP as triple superphosphate	Split N to wheat:
(P) : 35kgP as triple superphosphate until 2000;	N1+1+1 : 48+48+48 kgN in mid-March,mid-April,mid-May (strip 19)
to be reviewed in 2011	N1+2+1 : 48+96+48 kgN " " " (strip 18)
K : 90kgK as potassium sulphate	N1+3+1 : 48+144+48 kgN " " " (strip 12)
K2 : 180kgK as potassium sulphate, 2001-2005.	N1+4+1 : 48+192+48 kgN " " " (strip 17)
(plus 450 kgK in autumn 2000 only)	Split N to forage maize:
K* : 90kgK as potassium chloride	N2+1 : 96+48 kgN to seedbed and post-emergence (strip 19)
Mg : 12kgMg as Kieserite. Was 35kgMg every 3rd	N2+2 : 96+96 kgN " " (strip 18)
year 1974-2000. Previously 11kgMg as	N2+3 : 96+144 kgN " " (strip 12)
magnesium sulphate until 1973	N2+4 : 96+192 kgN " " (strip 17)
Mg2 : 24kgMg as Kieserite, 2001-2005.	N applied as ammonium nitrate (Nitram,34.5%N) since 1986;
(plus 60 kg Mg in autumn 2000 only)	as calcium ammonium nitrate (Nitro-chalk,21-27.5%N) 1968-85;
(Mg*) : 30kgMg as Kieserite 1974-2000. Previously	as ammonium salts until 1967 except N* which was sodium nitrate
31kgMg as magnesium sulphate until 1973	
(Na) : 16kgNa as sodium sulphate until 1973;	No N or FYM to oats
55kgNa on strip 12 only until 2000 (57kgNa	
until 1973)	
(C) : Castor meal to supply 96kgN until 1988	

Note : S (sulphur) has been added, by default, as part of the potassium sulphate, magnesium sulphate, Kieserite, FYM and ammonium sulphate applications. **S has not been applied to plot 14 from 2001 onwards.**

For more detailed information on treatments, particularly before 1968, 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 Yields of the Field Experiments 1971-2000