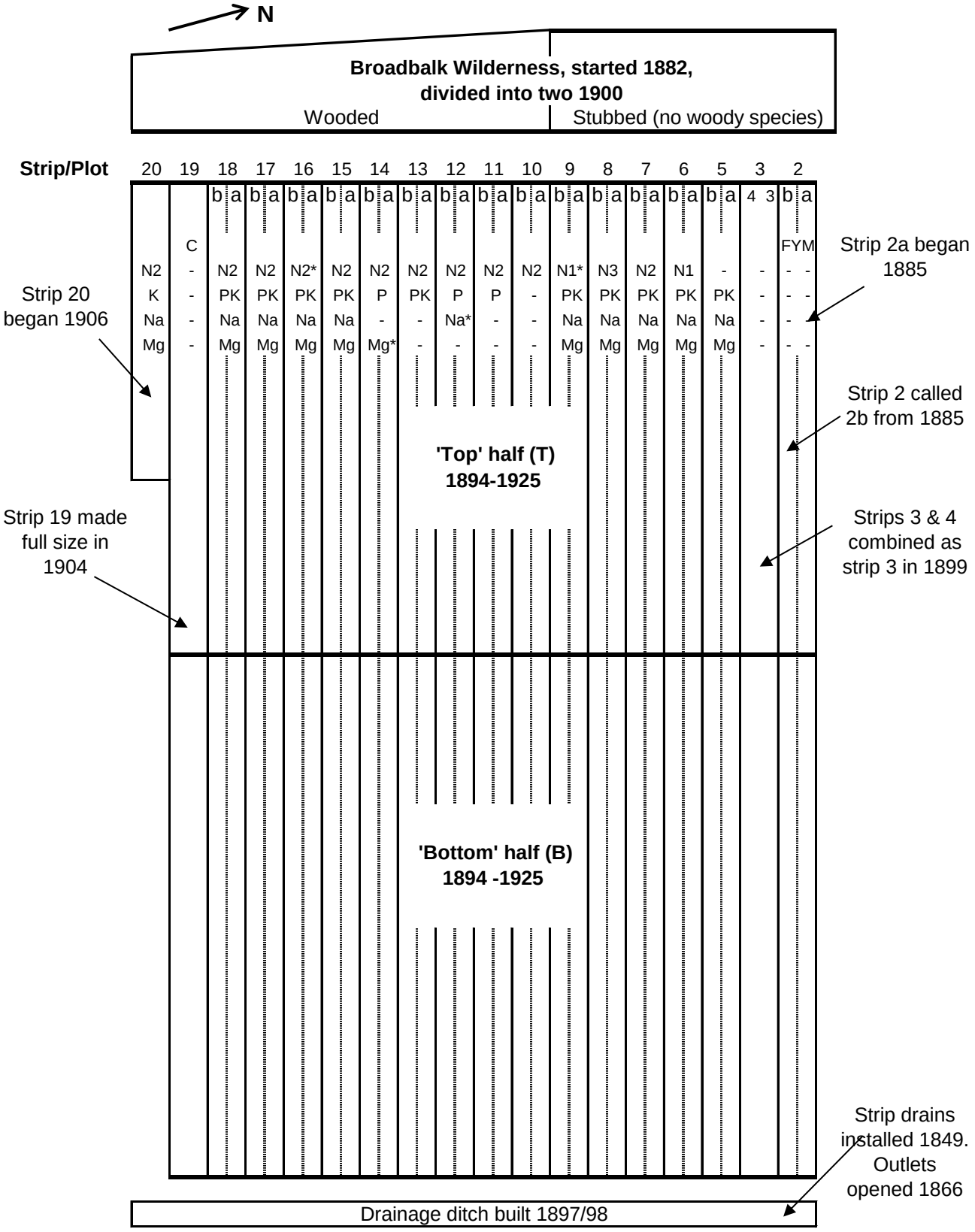
BROADBALK PLAN 1852-1925



Most strips divided into 2 halves length ways (a and b) 1847-1893
a and b halves combined to make one strip in 1894.
Strips divided into Top (T) and Bottom (B) halves most years 1894-1925

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Fertilizer and organic manure treatments 1852-1925

(Fertilizer treatments on many plots varied 1843-51, see Lawes & Gilbert 1864 for details)

Strip/Plot	Treatments applied each year since 1852:
2a	FYM since 1885. New plot made in 1885 receiving FYM as same rate as plot 2b
2b	FYM since autumn 1843; originally called plot 2, named plot 2b in 1885 when plot 2a was made
3	Nil. Originally 2 half plots, 3 (nil since 1844) and 4 (1844-51 NP; since 1852 nil). Harvested separately until 1899
5	PKNaMg
6	N1 PKNaMg
7	N2 PKNaMg
8	N3 PKNaMg
9	N1* PKNaMg since 1894; 9a and 9b received different treatments 1852-93:
9a	1852-54 N1*; 1855-84 N2* PKNaMg; 1885-93 N1* PKNaMg
9b	1852-54 N2*; 1855-84 N2*; 1885-93 N1*
10	N2
11	N2 P
12	N2 P Na*
13	N2 PK
14	N2 P Mg*
15	N2 PKNaMg since 1873; 15a and 15b received different treatments 1852-72: (timing of N application different to other plots, see below)
15a	1852-72 N2 PKNaMg
15b	1852-72 N1.5 PKNaMg + C
16	N2* PKNaMg since 1884; previously 1852-64 N4 PKNaMg; 1865-83 nil

Strips 17 and 18 treatments alternate each year:

17	N2 applied in even years; PKNaMg applied in odd years
18	N2 applied in odd years; PKNaMg applied in even years
19	C (rape cake); plot made full size in 1904. Originally half plot, 1852-78 N1.5 P + C; 1879-1903 C
20	N2 KNaMg since 1906, previously nil

Annual treatment per hectare:

Nil:	No fertilizer or manure
FYM:	Farmyard manure at 35t supplying approx. 225 kgN/ha
C:	Rape cake/castor bean meal: Supplying approx. 96kgN (N2). 0.56t 1852-78; 1.91t 1879-82; 2.12t 1883-1925 (omitted 1917-1920).
P:	35 kgP as superphosphate (omitted 1915)
K:	90 kgK as potassium sulphate (omitted 1915, 1917-19)
Na:	16 kgNa as sodium sulphate (omitted 1915)
Na*	57 kgNa as sodium sulphate (omitted 1915, 1917-19)
Mg:	11 kgMg as magnesium sulphate (omitted 1915)
Mg*	31 kgMg as magnesium sulphate (omitted 1915, 1917-19)

Nitrogen: Annual treatment per hectare

N1:	48 kgN as ammonium sulphate	N1*:	48 kgN as sodium nitrate
N1.5	72 kgN as ammonium sulphate	N2*:	96 kgN as sodium nitrate
N2:	96 kgN as ammonium sulphate		
N3:	144 kgN as ammonium sulphate		
N4:	192 kgN as ammonuim sulphate		

Timing of Nitrogen applications:

Ammonium sulphate:

1852-72	All applied in autumn
1873-77	All applied in autumn, except plot 15 in spring
1878-83	All applied in spring, except plot 15 in autumn
1884-1967	24 kgN applied in autumn, remainder in spring (except plot 15 all in autumn)

Sodium nitrate (**N***):

1867-1967	All applied in spring, as one application 1867-98, as two equal amounts since 1899, applied from six days to six weeks apart

Sources of data:

- Johnston, A.E. & Garner, H.V. (1969) Rothamsted Report for 1968, part 2, pp12-25. https://doi.org/10.23637/ERADOC-1-34916
- Lawes, J. B. and Gilbert, J. H. (1864) "Report of experiments on the growth of wheat, for twenty years in succession on the same land", J Roy Agric Soc England **25,** Part I, pp93-185 and Part II, pp449-501.

Please contact the e-RA Curators for further information