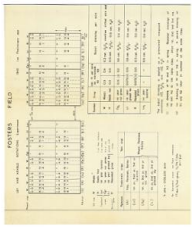
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# Collection of Plans for the Fosters Ley-arable Experiment



*Full Table of Content*

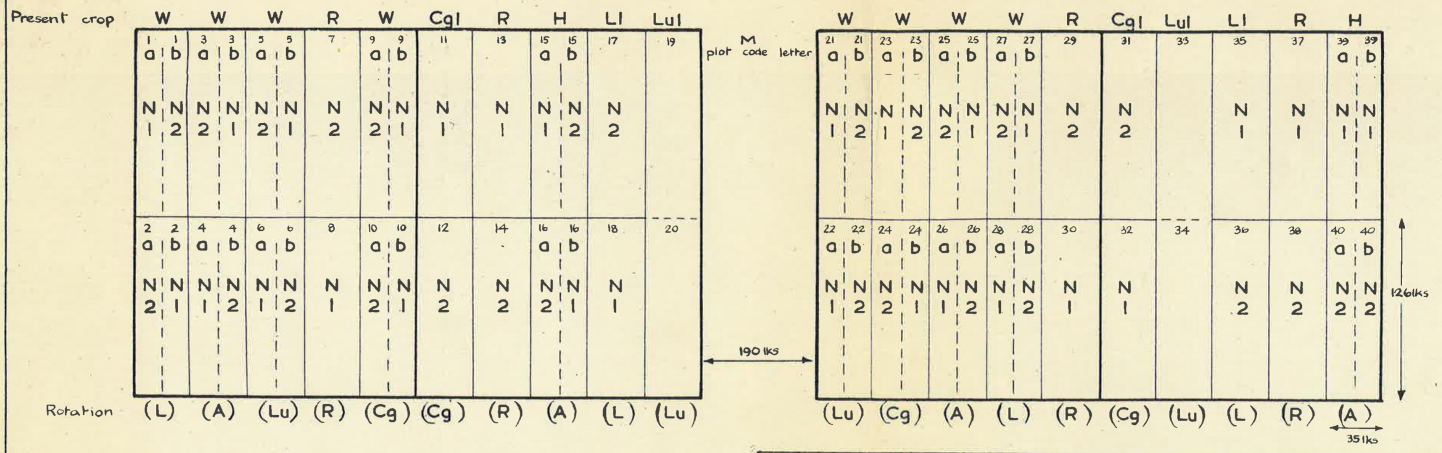
## Fosters Ley-arable 1949-59

### Rothamsted Research

Rothamsted Research (1949-1990) *Fosters Ley-arable 1949-59 ;* Collection Of Plans For The Fosters Ley-Arable Experiment, pp 1 - 11

# FOSTERS FIELD

LEY AND ARABLE ROTATIONS Experiment 1949 1st Preliminary year




| | | | |
|---|---|---|---|
| Test crop | W | Wheat | |
| Treatment crops | H | Seeds hay | 1 cut then fallowed |
| | Lul | 1st year lucerne | 1 or more cuts |
| | Cgl | 1st year cut grass | 3 or 4 cuts |
| | Ll | 1st year grazed ley | grazed with sheep |
| Permanent grass | R | Reseeded grass | |

| Rotation | Treatment crops | Test crop |
|---|---|---|
| (A) | Hay, Potatoes, Barley | Wheat, Potatoes, Barley |
| (Lu) | 1st yr, 2nd yr, 3rd yr lucerne | |
| (Cg) | 1st yr, 2nd yr, 3rd yr cut grass | |
| (L) | 1st yr, 2nd yr, 3rd yr grazed ley | |

¼ plot = 0.02205 acre

For harvested areas see Field notebooks
17 rows by 7inch spacing by 124.5 links
82.17 feet

| Symbol | Crop | cwt. N per acre as nitrochalk N1 | N2 | Basal dressing per acre |
|---|---|---|---|---|
| W | Wheat | 0.3 | 0.6 | 0.2 cwt. $P_2O_5$ combine drilled with seed |
| H | Seeds hay | 0.3 | 0.6 | 0.15 cwt. $P_2O_5$, 0.15 cwt. $K_2O$ |
| $Cg_1$ | 1st year cut grass | 0.15 (i) | 0.3 | 0.6 cwt. $P_2O_5$, 0.6 cwt. $K_2O$ |
| Ll | 1st year grazed ley | 0.075 (ii) | 0.15 | 0.6 cwt. $P_2O_5$, 0.6 cwt. $K_2O$ |
| R | Reseeded grass | 0.075 (ii) | 0.15 | 0.3 cwt. $P_2O_5$, 0.3 cwt. $K_2O$ |
| $Lu_1$ | 1st year lucerne | — | — | 0.6 cwt. $P_2O_5$, 0.6 cwt. $K_2O$ |

The basal dressing is applied as a granulated compound containing 13% $P_2O_5$ and 13% $K_2O$.

(i) 1st dressing of N1 and N2 in spring. Repeated dressings of N1 and N2 at the same rates. After 1st, 2nd and 3rd cut.

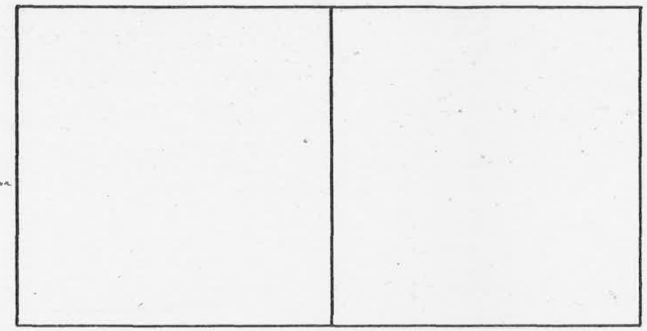
(ii) 1st dressing of N1 and N2 in spring. A second dressing of N1 and N2 later in summer at the same rates.

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# FOSTERS

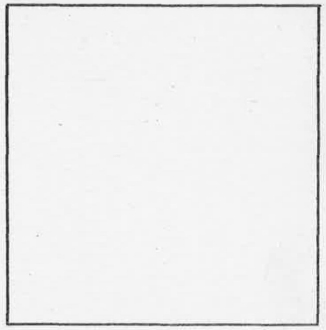
## LEY AND ARABLE ROTATIONS EXPERIMENT

1950 2nd year

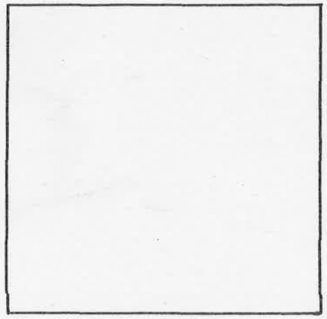


Block 10

Block 11



Block 12



Block 6

| Li | Cgl | Lul | R | H | W | W | W | R | W | R | W | W | W | W | Present crop |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 61 | 63 | 65 | 67 | 69 | 71 | 73 | 75 | 77 | 79 | 81 | 83 | 85 | 87 | 89 | |
| | a b | | | a b | a b | a b | a b | | a b | | a b | a b | a b | a b | |
| N | N N | | N | N N | N N | N N | N N | N | N N | N | N N | N N | N N | N N | |
| 2 | 2 1 | | 1 | 2 2 | 2 2 | 1 2 | 1 2 | 2 | 1 1 | 2 | 1 2 | 2 1 | 2 2 | 1 2 | |
| 62 | 64 | 66 | 68 | 70 | 72 | 74 | 76 | 78 | 80 | 82 | 84 | 86 | 88 | 90 | |
| | a b | | | a b | a b | a b | a b | | a b | | a b | a b | a b | a b | |
| N | N N | | N | N N | N N | N N | N N | N | N N | N | N N | N N | N N | N N | |
| 1 | 1 2 | | 2 | 1 1 | 1 1 | 1 2 | 2 1 | 1 | 2 2 | 1 | 1 2 | 1 2 | 1 1 | 2 1 | |
| (L) | (Cg) | (Lu) | (R) | (A) | (Cg) | (L) | (A) | (R) | (Lu) | (R) | (Cg) | (L) | (A) | (Lu) | Rotation |
| Block 7 | | | | | Block 8 | | | | | Block 9 | | | | | |

| P | P | P | R | P | Cg2 | R | P | L2 | Lu2 | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3 | 5 | 7 | 9 | 11 | 13 | 15 | 17 | 19 | |
| a b | a b | a b | | a b | a b | | a b | | | |
| N N | N N | N N | N | N N | N N | N | N N | N | | |
| 1 2 | 2 1 | 2 1 | 2 | 2 1 | 1 2 | 1 | 1 2 | 2 | | |
| D | D | D D | | D | | | D | | | |
| 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | |
| a b | a b | a b | | a b | a b | | a b | | | |
| N N | N N | N N | N | N N | N N | N | N N | N | | |
| 2 1 | 1 2 | 1 2 | 1 | 2 1 | 1 2 | 2 | 2 1 | 1 | | |
| D | D | | | D | | | D | | | |
| (L) | (A) | (Lu) | (R) | (Cg) | (Cg) | (R) | (A) | (L) | (Lu) | |
| Block 1 | | | | | Block 2 | | | | | |

| P | P | P | P | R | Cg2 | Lu2 | L2 | R | P | Lul | Ll | Cgl | R | H | Present crop |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21 | 23 | 25 | 27 | 29 | 31 | 33 | 35 | 37 | 39 | 41 | 43 | 45 | 47 | 49 | |
| a b | a b | a b | a b | | a b | | | | a b | | | a b | | a b | |
| N N | N N | N N | N N | N | N N | | N | N | N N | | N | N N | N | N N | |
| 1 2 | 1 2 | 2 1 | 2 1 | 2 | 1 2 | | 1 | 1 | 1 1 | | 2 | 1 2 | 2 | 2 1 | |
| D | D | D | D | | | | | | D | | | | | | |
| 22 | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 | 42 | 44 | 46 | 48 | 50 | |
| a b | | a b | a b | | a b | | | | a b | | | a b | | a b | |
| N N | N N | N N | N N | N | N N | | N | N | N N | | N | N N | N | N N | |
| 1 2 | 2 1 | 1 2 | 1 2 | 1 | 2 1 | | 2 | 2 | 2 2 | | 1 | 2 1 | 1 | 1 2 | |
| D | D | D | D | | | | | | D | | | | | | |
| (Lu) | (Cg) | (A) | (L) | (R) | (Cg) | (Lu) | (L) | (R) | (A) | (Lu) | (L) | (Cg) | (R) | (A) | Rotation |
| Block 3 | | | | | Block 4 | | | | | Block 5 | | | | | |

126 lks

35 lks

Farm Road

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# FOSTERS

## LEY AND ARABLE ROTATIONS EXPERIMENT

1951 3rd year

Code letter M

N

n,d on treatment crops
N,D on test crops (W,P,B)
(d) (D) residuals of 1950 dung treatments

Block 10

| W | W | W | W | IR | IL | H | ICg | ILu | IR |
|---|---|---|---|---|---|---|---|---|---|
| 91 a b N N 2 2 | 93 a b N N 2 1 | 95 a b N N 1 2 | 97 a b N N 2 2 | 99 N 1 | 101 n 2 | 103 a b n n 1 2 | 105 a b n n 2 1 | 107 | 109 N 2 |
| 92 a b N N 1 1 | 94 a b N N 2 1 | 96 a b N N 2 1 | 98 a b N N 1 1 | 100 N 2 | 102 n 1 | 104 a b n n 1 2 | 106 a b n n 2 1 | 108 | 110 N 1 |
| (Cg) | (Lu) | (L) | (A) | (R) | (L) | (A) | (Cg) | (Lu) | (R) |

Block 11

| W | W | IR | W | W | Present crop |
|---|---|---|---|---|---|
| 111 a b N N 2 1 | 113 a b N N 1 1 | 115 N 1 | 117 a b N N 1 2 | 119 a b N N 2 1 | |
| 112 a b N N 1 2 | 114 a b N N 2 2 | 116 N 2 | 118 a b N N 1 2 | 120 a b N N 2 1 | |
| (L) | (Lu) | (R) | (A) | (Cg) | Rotation |

Block 12

| ILu | IR | IL | ICg | H | 2L | 2Cg | 2Lu | 2R | P | P | P | P | 2R | P | 2R | P | P | P | P | Present crop |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 51 | 53 N 1 | 55 n 1 | 57 a b n n 2 1 | 59 a b n n 1 1 | 61 n 2 | 63 a b n n 2 1 | 65 | 67 N 1 | 69 a b n n 2 2 d | 71 a b N N 2 2 D | 73 a b N N 1 2 D | 75 a b N N 1 2 | 77 N 2 | 79 a b N N 1 1 D | 81 N 2 | 83 a b N N 1 2 D | 85 a b N N 2 1 D | 87 a b N N 2 2 D | 89 a b N N 1 2 D | |
| 52 | 54 N 2 | 56 n 2 | 58 a b n n 1 2 | 60 a b n n 2 2 | 62 n 1 | 64 a b n n 1 2 | 66 | 68 N 2 | 70 a b n n 1 1 d | 72 a b N N 1 1 D | 74 a b N N 1 2 D | 76 a b N N 2 1 D | 78 N 1 | 80 a b N N 2 2 D | 82 N 1 | 84 a b N N 1 2 D | 86 a b N N 2 1 D | 88 a b N N 1 1 D | 90 a b N N 2 1 D | |
| (Lu) | (R) | (L) | (Cg) | (A) | (L) | (Cg) | (Lu) | (R) | (A) | (Cg) | (L) | (A) | (R) | (Lu) | (R) | (Cg) | (L) | (A) | (Lu) | Rotation |

Block 6 Block 7 Block 8 Block 9

E Grazed this yr

| B | B | B | 3R | B | 3Cg | 3R | B | 3L | 3Lu | Present crop |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 a b N N 1 2 (D) | 3 a b N N 2 1 (D) | 5 a b N N 2 1 (D) (D) | 7 N 2 | 9 a b N N 2 1 (D) | 11 a b n n 1 2 | 13 N 1 | 15 a b n n 1 2 (d) | 17 n 2 | 19 | |
| 2 a b N N 2 1 (D) | 4 a b N N 1 2 (D) | 6 a b N N 1 2 | 8 N 1 | 10 a b N N 2 1 (D) | 12 a b n n 1 2 | 14 N 2 | 16 a b n n 2 1 (d) | 18 n 1 | 20 | |
| (L) | (A) | (Lu) | (R) | (Cg) | (Cg) | (R) | (A) | (L) | (Lu) | Rotation |

Block 1 Block 2

| B | B | B | B | 3R | 3Cg | 3Lu | 3L | 3R | B | 2Lu | 2L | 2Cg | 2R | P | Present crop |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21 a b N N 1 2 (D) | 23 a b N N 1 2 (D) | 25 a b N N 2 1 (D) | 27 a b N N 2 1 (D) | 29 N 2 | 31 a b n n 1 2 | 33 | 35 n 1 | 37 N 1 | 39 a b n n 1 1 (d) | 41 | 43 n 2 | 45 a b n n 1 2 | 47 N 2 | 49 a b n n 2 1 d | |
| 22 a b N N 2 1 (D) | 24 a b N N 1 2 (D) | 26 a b N N 1 2 | 28 a b N N 1 2 (D) | 30 N 1 | 32 a b n n 2 1 | 34 | 36 n 2 | 38 N 2 | 40 a b n n 2 2 (d) | 42 | 44 n 1 | 46 a b n n 2 1 | 48 N 1 | 50 a b n n 1 2 d | |
| (Lu) | (Cg) | (A) | (L) | (R) | (Cg) | (Lu) | (L) | (R) | (A) | (Lu) | (L) | (Cg) | (R) | (A) | Rotation |

Block 3 Block 4 Block 5

3 lks cross path

12 lks X 1/25426 lks

35 lks

arm Road

16 MAR 1951

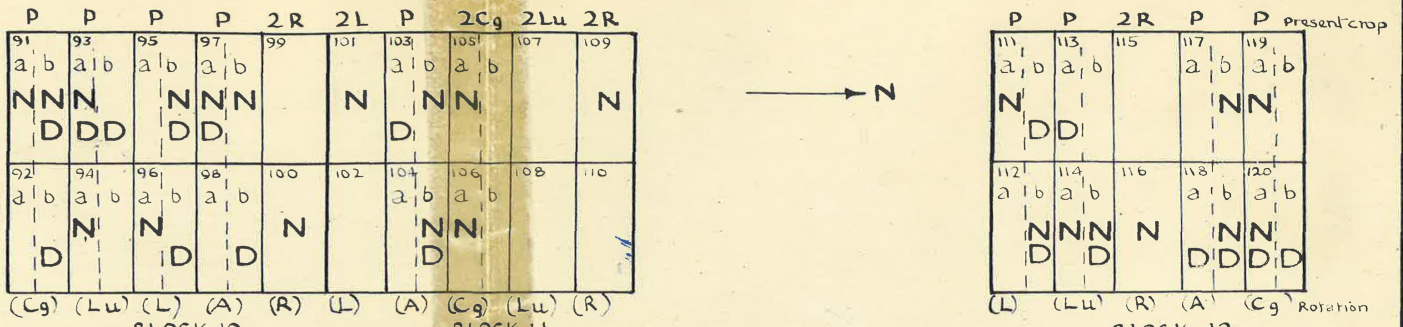
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# FOSTERS
## LEY AND ARABLE ROTATIONS EXPERIMENT

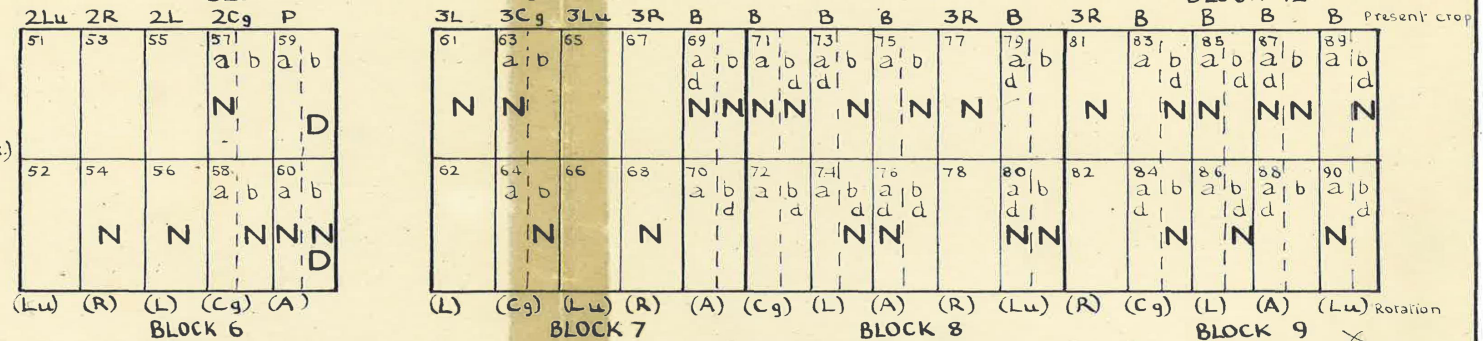
1952 4th year

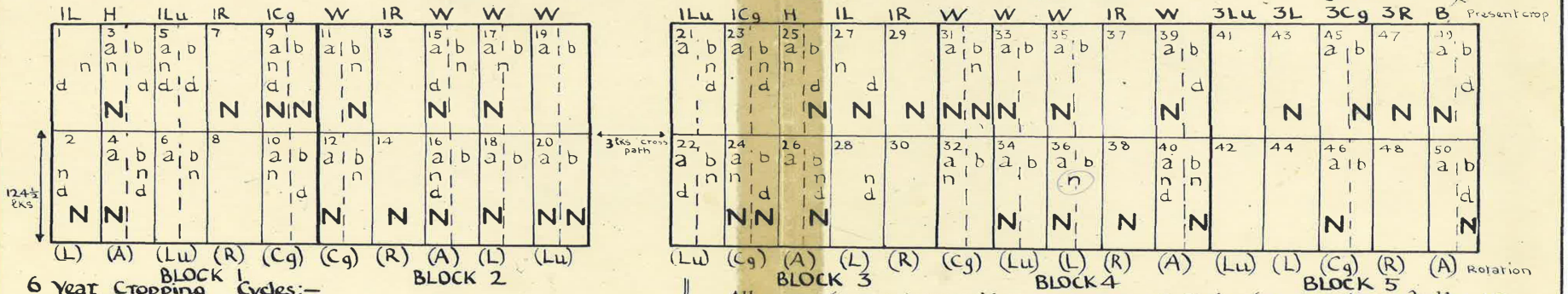
5 FEB 1952

code letter M.




AREA MANURED
¼ plot – 1/45 acre (approx.)




6 Year Cropping Cycles:–

Treatment crops

Lu = 3 years Lucerne
L = 3 years Grazed Ley
Cg = 3 years Cut Grass
A = Hay, Potatoes, Barley
R = Reseeded Permanent Grass 2 years grazed 3rd year Hay.

} Test crops: Wheat, Potatoes, Barley.

All crops (except Lucerne) have nitrogen at Single (no symbol) & at Double (N) rates

N { Cg:– 2 cwt N/c in spring, 2 cwt N/c after each cut.
L:– 1 cwt N/c in " 1 cwt N/c later in season
Wheat (W) 4 cwt N/c, Barley (B) 2·7 cwt N/c, Hay (H) 4 cwt N/c.
Potatoes (P) 5 cwt. Sulphate of ammonia

D = Dung at 12 tons per acre to potato crops only
n = N given in previous 3 year crop sequence
d = D to previous potato crop

Basal P K. All rotations and permanent grass :– 13 cwt/a superphosphate 4 cwt/a muriate of potash spread over 6 years (Equivalent) Calcium Carbonate applied once in 6 years before test crop barley. to 2·4 cwt $P_2O_5$ & 2·4 cwt $K_2O$)

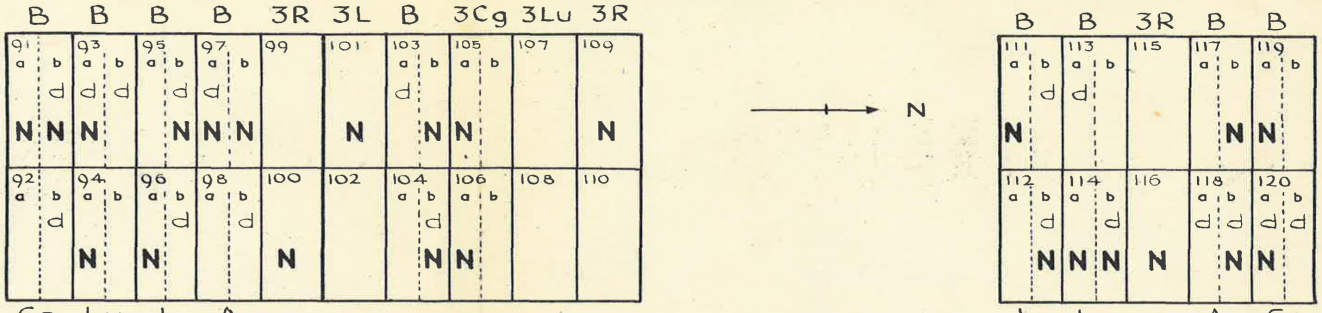
dp 5

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20 NOV 1952

# LEY AND ARABLE ROTATIONS EXPERIMENT — FOSTERS — 1953 5th year

Code letter M.

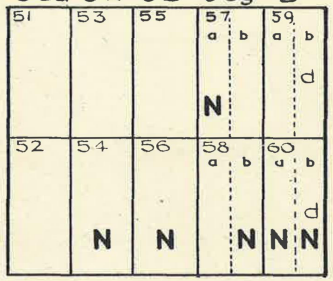



Rotation

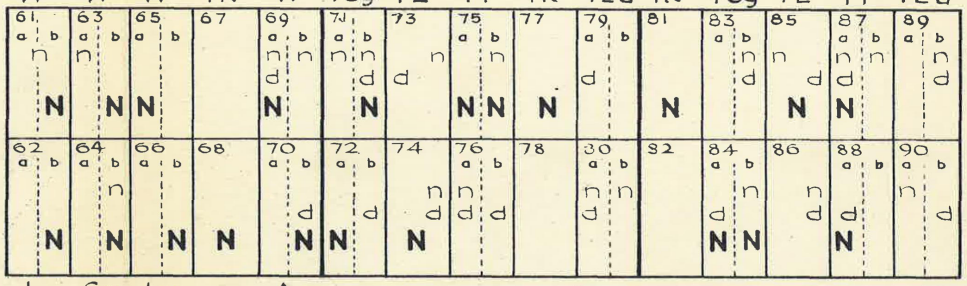
Present crop

Area manured
¼ plot – 1/45 acre
(approx.)

BLOCK 10




BLOCK 11




BLOCK 12

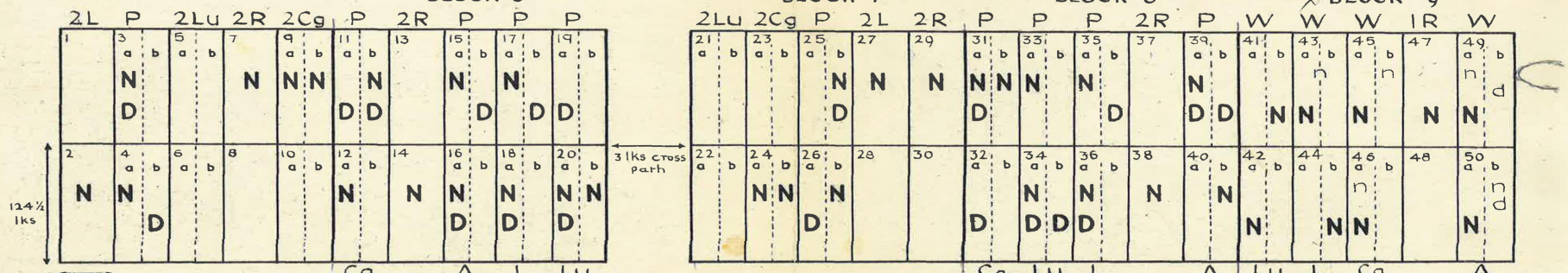



BLOCK 6

BLOCK 7

BLOCK 8

BLOCK 9




BLOCK 1 BLOCK 2 BLOCK 3 BLOCK 4 BLOCK 5

6 Year cropping cycles :-

Treatment crops

Lu = 3 years Lucerne
L = 3 years Grazed Ley
Cg = 3 years Cut Grass
A = Hay, Potatoes, Barley
R = Reseeded Permanent Grass 2 years grazed 3rd year hay.

Test crops

} Wheat, Potatoes, Barley.

All crops (except Lucerne) have nitrogen at Single (no symbol) & at double (N) rates

N { Cg :- 2 cwt. N/c in spring. 2 cwt. N/c after each cut.
L :- 1 cwt. N/c in spring, 1 cwt. N/c later in season.
Wheat (W) 4 cwt. N/c, Barley (B) 2·7 cwt. N/c, Hay (H) 4 cwt N/c.
Potatoes (P) 5 cwt. sulphate of ammonia.

D = Dung at 12 tons per acre to potato crops only.
n = High nitrogen given in previous 3 year crop sequence.
d = Dung to previous potato crop.

Basal PK. All rotations and permanent grass :- 13 c.p.a. Super. 4 c.p.a Mur/potash spread over 6 years.

1949

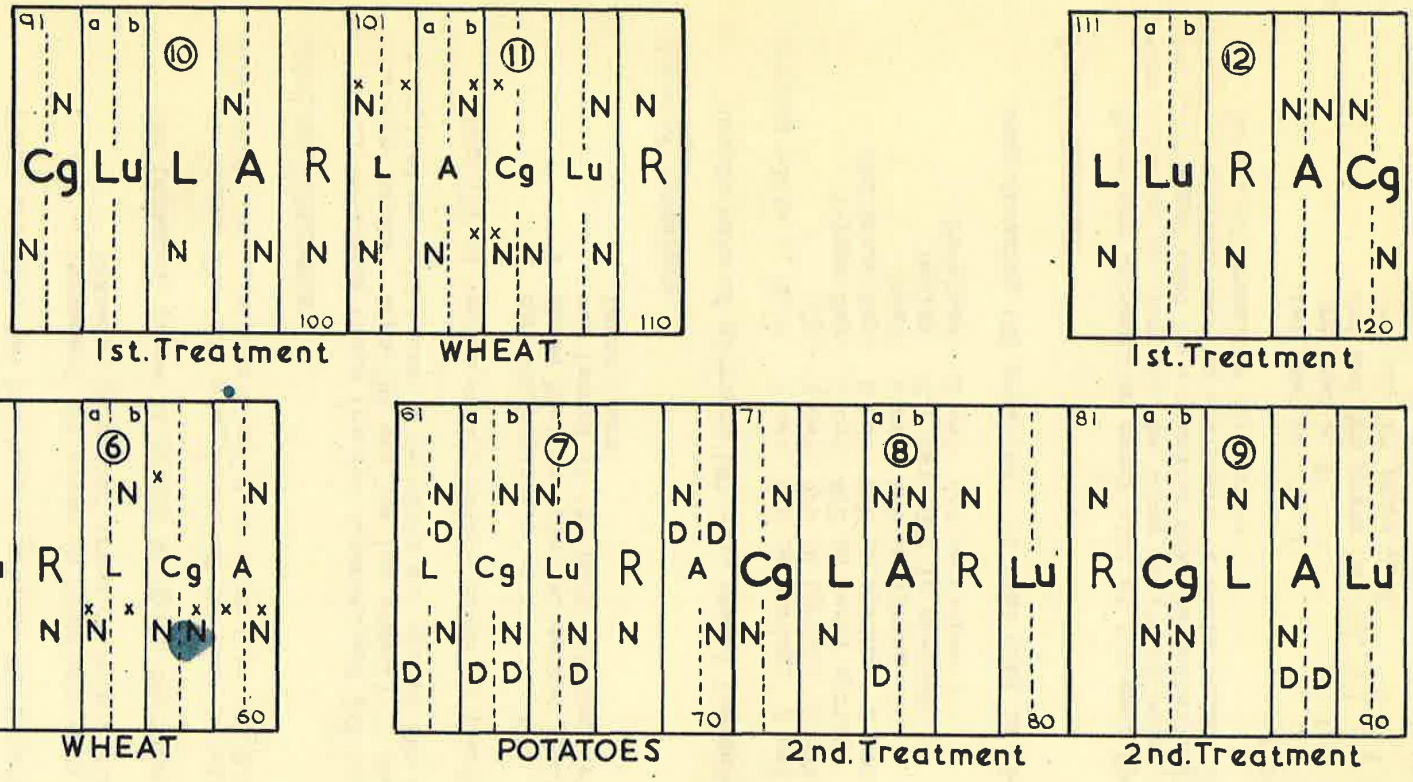
g dd

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# Rothamsted LEY-ARABLE Rotations FOSTERS 6th. year 1954

N

Code letter M




Area manured
¼ plot - 1/45 acre
(approx.)

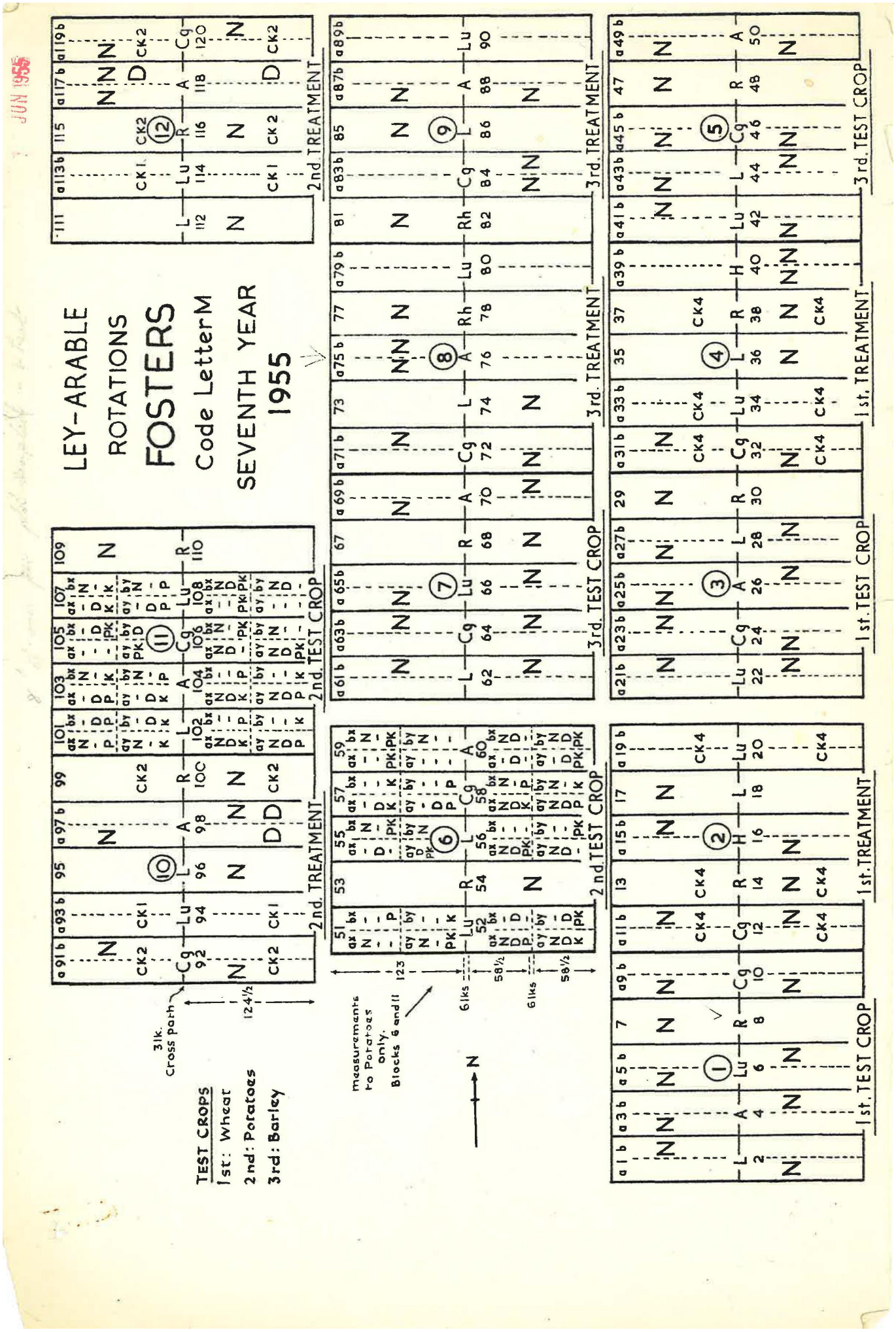
Treatments overleaf

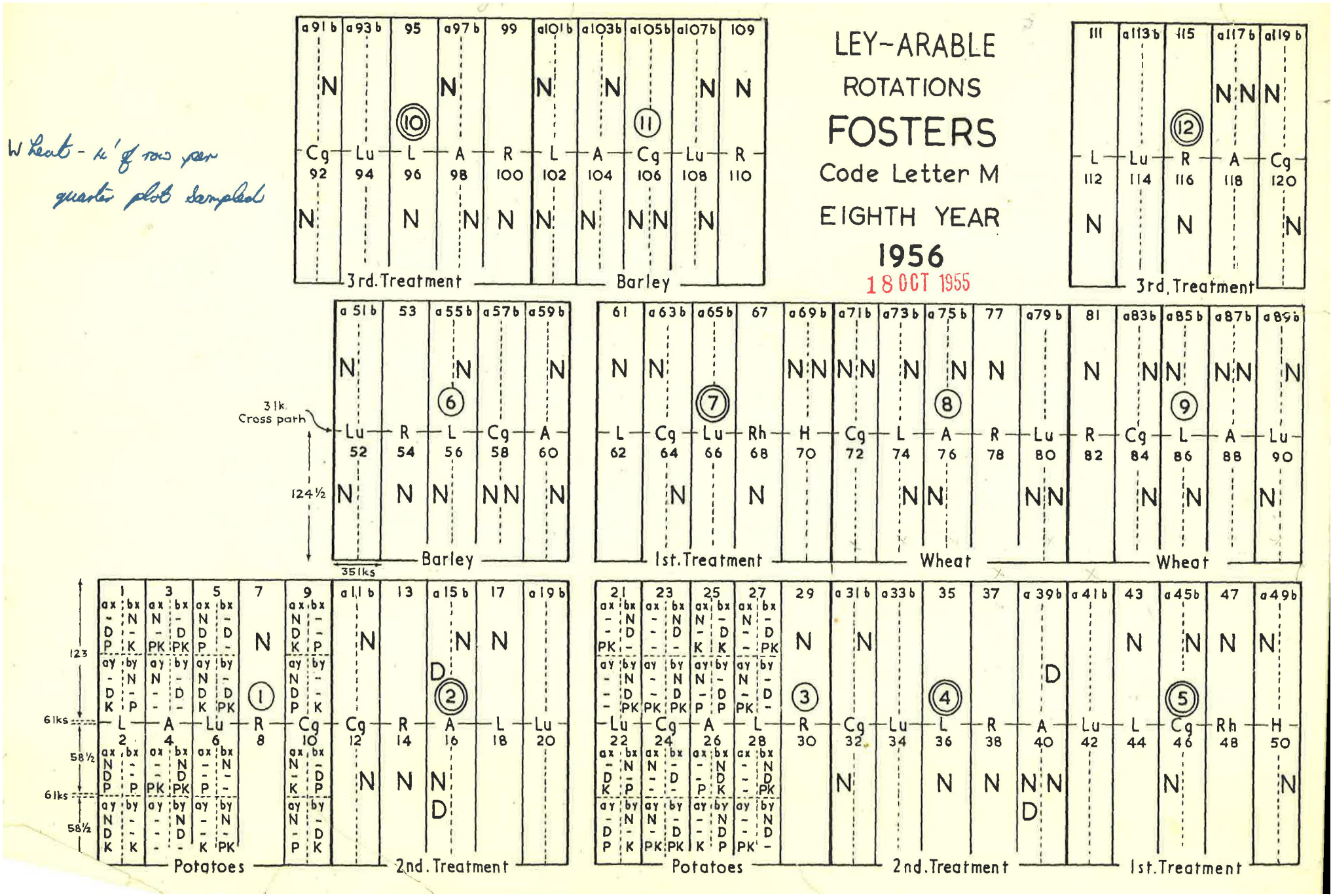
21 AUG 1955

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dp 7

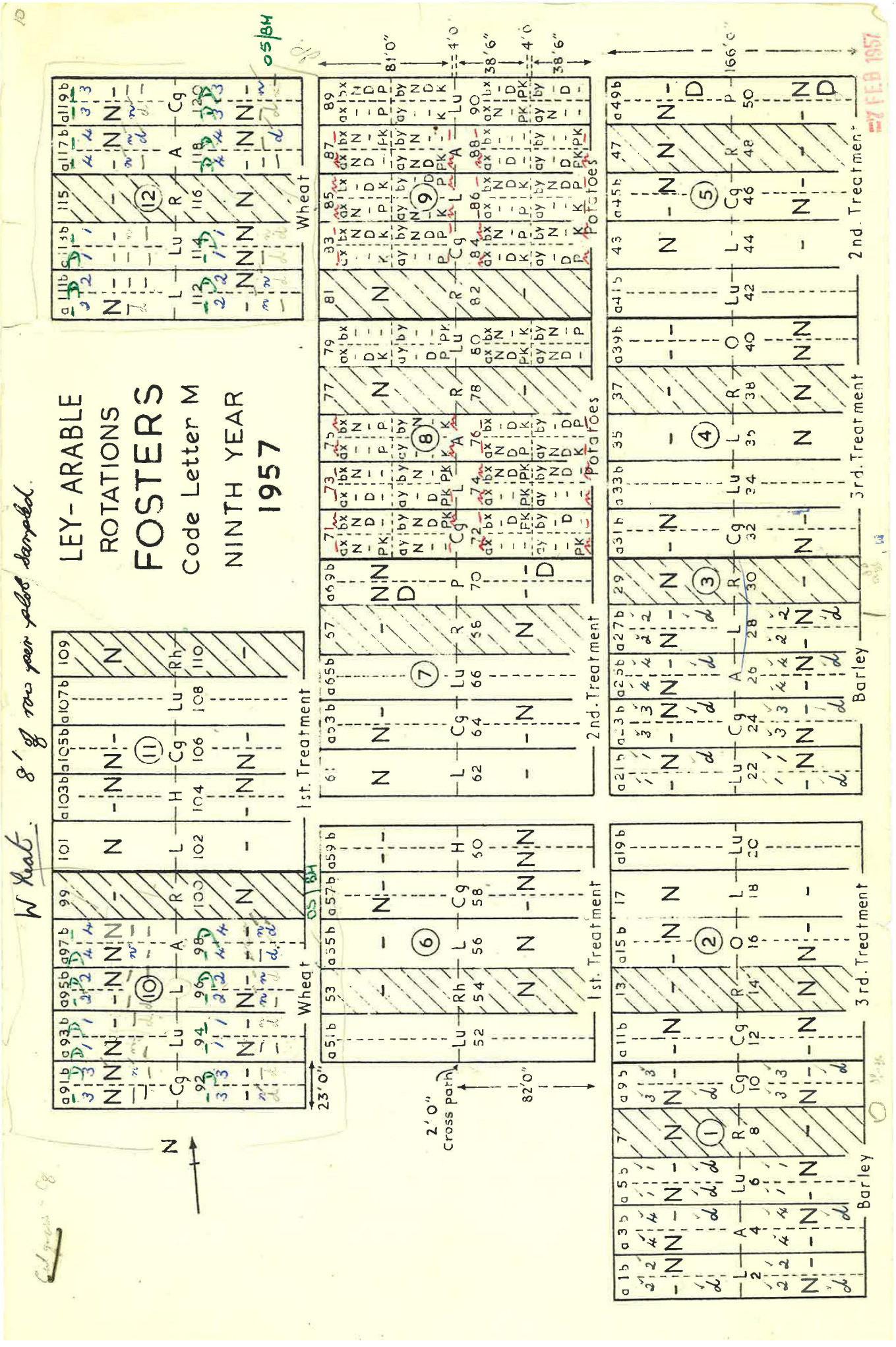
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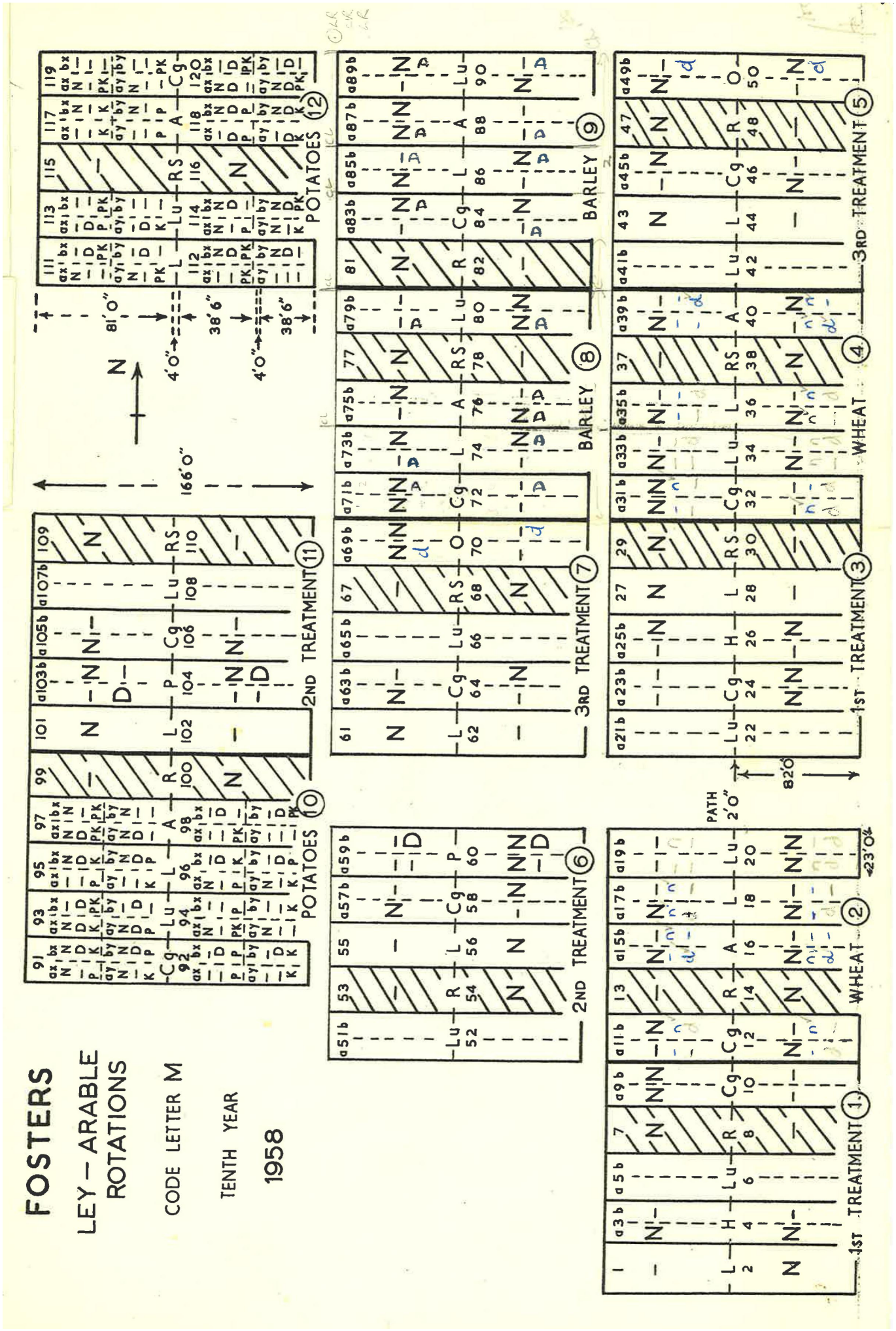



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