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50/CD/2 Winter Beans - Fertilizer Placement - Rothamsted

Rothamsted Research

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50/ca/2.1

WINTER BEANS

Fertilizer placement - West Barnfield II 1950.

System of replication: 2 randomized blocks of 16 plots each.

Area of each plot: 0.0152 acre. Area harvested: 0.0121 acre.

Treatments: None (quadruplicate plots) and all combinations of:

Levels of fertilizer: 3.2, 6.4 cwt per acre granular compound fertilizer (13% P_2O_5 , 13% K_2O).

Methods of placement: "Drilled" 3" below soil surface and 2" to side of seed (duplicate plots); broadcast on the plough furrow and cultivated in (E); broadcast on seed bed and harrowed in (L); half broadcast on the plough furrow and cultivated in, half drilled; half broadcast on seed bed and harrowed in, half drilled.

Basal manuring: None.

Cultivations, etc: Ploughed: Sept 15-19. "E" fertilizers applied: Sept 30. Rolled and springtined: Oct 10. Disc and tooth harrowed: Oct 12. "L" fertilizers applied, beans and fertilizers drilled: Oct 12. Harrowed in: Oct 14. Harrowed: Apr 20. Harvested: July 31. Previous crop: Wheat.

Standard errors per plot:

Yield, dry matter: 1.14 cwt per acre or 5.9% (20 d.f.)

Plant number: 8.61 thousands per acre or 6.6% (20 d.f.)

50/ca/2.2

Summary of Results

Compound Fertilizer Cwt per acre	Drilled	Broad- cast on plough furrow	Broad- cast on seed bed	Broad- cast on plough furrow and drilled	Broad- cast on seed bed and drilled	Mean
Yield, dry matter: cwt per acre						
None	(±0.57)		(±0.80)			15.3 (±0.40)
3.2	20.4	19.2	16.6	19.8	20.2	19.4
6.4	22.2	22.4	20.0	22.7	22.2	21.9
Mean (±0.57)	21.3 ⁽¹⁾	20.8	18.3	21.3	21.2	19.3
Standard error (1) ±0.40						

Plant number: thousands per acre						
None	(±4.3)		(±6.1)			127 (±3.0)
3.2	132	122	128	135	128	130
6.4	130	136	121	129	145	132
Mean (±4.3)	131 ⁽²⁾	129	125	132	136	130
Standard error (2) ±3.0						