Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readible, or you suspect there are some problems, please let us know and we will correct that.



Yields of the Field Experiments 1995



Full Table of Content

95/R/BES/4 Weed Competition and Spring Beans - S. Beans

Rothamsted Research

Rothamsted Research (1996) 95/R/BES/4 Weed Competition and Spring Beans - S. Beans; Yields Of The Field Experiments 1995, pp 129 - 131 - DOI: https://doi.org/10.23637/ERADOC-1-50

95/R/BES/4

SPRING BEANS

WEED COMPETITION AND SPRING BEANS

Object: To study the effects of three weeds, oats (Avena sativa), charlock (Sinapsis arvensis) and chickweed (Stellaria media), on the growth and yield of spring beans - Webbs.

Sponsor: P.J.W. Lutman.

Design: 3 randomised blocks of 20 plots.

Whole plot dimensions: 3.0×10.0 .

Treatments:

WEED	Weed species and density, average number of established plants per $\ensuremath{\text{m}}^2$:		
01	Oats, 18.2		
02			
	Oats, 44.8		
03	Oats, 85.3		
04	Oats, 167.7		
CE1	Charlock, 0		
CE2	Charlock, 0		
CE3	Charlock, 22.7		
CE4	Charlock, 32.3		
CL1	Charlock, 0		
CL2	Charlock, 0		
CL3	Charlock, 18.9		
CL4	Charlock, 37.8		
CW1	Chickweed, 39.3		
CW2	Chickweed, 68.8		
CW3	Chickweed, 152.1		
CW4	Chickweed, 309.6		
-	None (quadrupled)		

- NOTES: (1) Weeds sown same day as the beans, except CL1-CL4 sown 13 days later.
 - (2) Oats were cv. Dula dressed Rappor Plus.
 - (3) Target weed densities, plants per m2:

Oats		Charlock			Chickweed		
01	40	CE1	50	CL1	50	CW1	100
02	120	CE2	100	CL2	100	CW2	200
03	240	CE3	200	CL3	200	CW3	400
04	480	CE4	400	C14	400	CW4	800

Target sowing date of CL1-CL4 was 10 days after beans.

95/R/BES/4

Experimental diary:

15-Aug-94 : B : Straw baled and removed. 06-Sep-94 : B : PK as (0:20:32) at 1317 kg. 11-Nov-94 : B : Stubble topped. 21-Nov-94 : B : Ploughed. 21-Mar-95 : B : Spring-tine cultivated. 23-Mar-95 : T : WEED 01, 02, 03, 04, CE1, CE2, CE3, CE4, CW1, CW2, CW3, CW4: Weed seeds broadcast. : B : Rotary harrowed, Alfred, undressed, drilled at 50 seeds per m2. 05-Apr-95 : T : WEED CL1, CL2, CL3, CL4: Charlock seed broadcast. 02-May-95 : B : Decis at 300 ml in 200 1. 06-Jul-95 : B : Bravo 500 at 3.0 1 with Pirimicarb 50 DG at 280 g in

29-Aug-95 : B : Combine harvested.

220 1.

- NOTES: (1) Weeds failed to establish for WEED CE1, CE2, CL1 and CL2 and have been omitted from the analysis.
 - (2) Weed populations were assessed during April and May. Samples of weeds and crop were taken on seven occasions from May to August to measure relative rates of growth. Visual and photographic assessments of ground cover were made during May and June.

95/R/BES/4

GRAIN TONNES/HECTARE

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

WEED	
01	2.46
02	2.04
03	1.92
04	1.04
CE3	2.84
CE4	2.33
CL3	3.17
CL4	2.58
CW1	3.11
CW2	2.56
CW3	3.23
CW4	2.75
-	3.09
Mean	2.65

*** Standard errors of differences of means ***

WEED

0.417 min.rep 0.208 max.rep

WEED

max-min - v any of the remainder
min.rep Any of the remainder

***** Stratum standard errors and coefficients of variation *****

Stratum d.f. s.e. cv% BLOCK.WP 33 0.511 19.3

GRAIN MEAN DM% not measured

PLOT AREA HARVESTED 0.00020