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53/CD/1 Winter Beans - Cultivations - Rothamsted

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53/Cd/1.1

WINTER BEANS

Effect of cultivations on ploughed in beans - Long Hoos V 1953.

System of replication: 6 randomized blocks of 6 plots each, in 3 block pairs, the effect of spraying being confounded with block differences.

Area of each plot: 0.0145 acre.

Treatments: All combinations of:

Cultivations on furrows: Work down furrows in autumn (A); work down furrows in spring (B); A and B.

Cultivations by weeding: None; mechanical weeder cultivation in spring (W).

Spraying (on blocks): None; DNBP medium volume.

Basal dressing: None.

Cultivations, etc.: Beans ploughed in at 3 cwt per acre: Nov 4, 1952. Heavy harrowed 'A' and 'AB' plots: Nov 7. Medium harrowed 'A' and 'AB' plots twice: Nov 8. Sprayed appropriate blocks with DNBP: Apr 28, 1953. Harrowed 'B' plots: May 5. Weeded 'W' plots: May 12. Horse hoed all plots: May 12 and again June 6. Hand weeded: June 17, June 29, July 27. Harvested: Sept 5. Variety: Deneb (own seed). Previous crop: Potatoes.

Standard errors per plot:

Unsprayed blocks: 4.25 cwt per acre or 17.2% (10 d.f.).

Sprayed blocks: 1.50 cwt per acre or 6.1% (9 d.f.)*

* 1 missing value.

53/cd/1.2

Summary of Results

Weeding	Grain: cwt per acre								
	Unsprayed Work down furrows				Mean	Sprayed Work down furrows			Mean
	In Autumn	In Spring	In Autumn and Spring	In Autumn		In Spring	In Autumn and Spring		
	(±2.46)					(±0.87)			
None	25.6	26.4	24.4	25.5	21.6	23.7	25.9	23.8	
Mechanical	24.3	24.8	23.1	24.1	26.6	25.4	23.6	25.2	
Mean	24.9	25.6	23.8	24.8	24.1	24.6	24.8	24.5	
	(±1.74)					(±0.61)			
Difference	-1.3	-1.6	-1.3	-1.4	+5.0	+1.7	-2.3	+1.4	
	(±3.47)				(±2.01)	(±1.23)			(±0.71)

Straw: cwt per acre								
None	40.3	35.2	41.5	39.0	40.4	27.5	37.2	35.0
Mechanical	38.5	35.4	36.4	36.8	37.7	30.2	33.7	33.8
Mean	39.4	35.3	39.0	37.9	39.0	28.8	35.4	34.4
Difference	-1.8	+0.2	-5.1	-2.2	-2.7	+2.7	-3.5	-1.2

Grain: cwt per acre

Weeding	Responses to spraying			Mean
	In Autumn	In Spring	In Autumn and Spring	
	(±2.66)*			
None	-4.0	-2.7	+1.5	-1.7
Mechanical	+2.3	+0.6	+0.5	+1.1
Mean	-0.8	-1.0	+1.0	-0.3
	(±1.88)*			
Difference	+6.3	+3.3	-1.0	+2.8
	(±3.76)			(±2.17)

*for use in testing the differences of 2 responses to spraying.