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Yields of the Field Experiments 1957

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57/R/BB/1 Deep Cultivation Rotation

Rothamsted Research

Rothamsted Research (1958) *57/R/BB/1 Deep Cultivation Rotation* ; Yields Of The Field Experiments 1957, pp 28 - 29 - DOI: <https://doi.org/10.23637/ERADOC-1-177>

57/Bb/1.1

DEEP CULTIVATION ROTATION EXPERIMENT

The 14th and final year

Deep ploughing, fertilizers and dung - Long Hoos I and II 1957.

For treatments etc. see "Details of the Classical and Long Term Experiments" 1956.

Area of each plot: 0.0312 acres. Area harvested: Ley, 0.0265 acres; wheat, 0.0189 acres.

Termination of Experiment. Series 5 and 6, due to carry potatoes and sugar beet in 1957, were terminated. They completed the two cycles of the 6 course rotation in 1956 and were sown with barley this year. With the completion of the ley and wheat crops in 1957, the experiment is now terminated.

Cultivations, etc.:

Ley

Seeds undersown: Apr 24, 1956. Cut: June 19, 1957. Seeds mixture 18 lb S24 perennial ryegrass, 8 lb Montgomery Late Flowering red clover, 2 lb American Alsike clover.

Wheat

"Deep" and "Shallow" plots ploughed: Aug 9, 1956. Seed drilled at $2\frac{3}{4}$ bushels per acre: Oct 25. Sulphate of ammonia applied: Apr 30, 1957. Sprayed with MCPA at 3 pints in 40 gallons per acre: May 7. Combine harvested: Aug 24. Variety: Yeoman.

Standard errors per plot.

Ley, Hay: 2.60 cwt per acre or 5.4% (4 d.f.)
Wheat, Grain (at 85% dry matter): 0.95 cwt per acre or 5.9% (4 d.f.)

57/Bb/1.2

Summary of Results

Response to	Mean	Responses to treatments to previous sugar beet							
		Ploughing		Dung		Phosphate		Potash	
		Shallow	Deep	Abs.	Pres.	Abs.	Pres.	Abs.	Pres.

Ley

Hay: Mean yield 48.5 cwt per acre

	(±1.30)	(±1.84)							
Ploughing deep-shallow	+0.8	-	-	-1.8	+3.4	-1.5	+3.1	+1.2	+0.4
Dung	+5.7	+3.1	+8.3	-	-	+0.8	+10.6	+5.6	+5.8
Phosphate	-0.3	-2.6	+2.0	-5.2	+4.6	-	-	-2.0	+1.4
Potash	-1.5	-1.1	-1.9	-1.6	-1.4	-3.2	+0.2	-	-

Wheat*

Grain (at 85% dry matter): Mean yield 16.2 cwt per acre

	(±0.47)	(±0.67)							
Ploughing deep-shallow	-4.1	-	-	-2.9	-5.3	-3.7	-4.5	-3.6	-4.6
Dung	+0.2	+1.4	-1.0	-	-	-0.7	+1.1	-0.3	+0.7
Phosphate	+0.5	+0.9	+0.1	-0.4	+1.4	-	-	+0.2	+0.8
Potash	-0.8	-0.3	-1.3	-1.3	-0.3	-1.1	-0.5	-	-

*Cultivation treatments direct to wheat, manures to previous sugar beet.

Mean dry matter % as harvested:

Wheat, grain: 81.1