

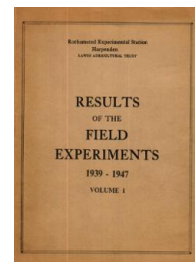
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Yields of the Field Experiments 1939-1947 Volume 1

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A/4 Agdell - Rotation

Rothamsted Research

Rothamsted Research (1948) *A/4 Agdell - Rotation* ; Yields Of The Field Experiments 1939-1947
Volume 1, pp 19 - 20 - DOI: <https://doi.org/10.23637/ERADOC-1-145>

A/4.1

CROPS GROWN IN ROTATION - AGDELL FIELD

The experiment, which began in 1848, compares two crop rotations, one with clover and the other with fallow, and the effect of mineral manure with and without nitrogen applied to the root crops.

Area of each plot, 2/5 acre.

Rotations: Turnips or swedes, barley, clover or beans, wheat.

Turnips or swedes, barley, fallow, wheat.

Until 1904, half of each plot of turnips was fed on the land, the remainder being carted off. Subsequently all the roots were carted.

Treatments and rates of dressing.

Applied to the root crops only (all amounts per acre):

None;

Mineral manure, with no nitrogen: Superphosphate, 84 lb. P_2O_5 ;
Sulphate of potash, 245 lb. K_2O ; sulphate of soda, 100 lb;
sulphate of magnesia, 200 lb.

Complete mineral and nitrogeous manure: As above, together with sulphate of ammonia, 43 lb. N and 2,000 lb. castor bean meal or rape dust.
~~per acre.~~

Crop Notes.

Year	Crop	Sown	Harvested	Variety
1939	Wheat	Oct. 27, 1938	Aug. 15	Red Standard
1940	Turnips	May 31	Nov. 28	Bruce
1941	Barley	March 19	Sept. 10	Plumage Archer
1942	Clover	May 9, 1941	June 29	Montgomery Red
1943	Wheat	Oct. 15, 1942	Aug. 2	Red Standard
1944	Swedes	June 23	Nov. 5	Mixed seed
1945	Barley	March 9	Aug. 14	Plumage Archer
1946	Clover	April 6, 1945	June 24	Montgomery Red
1947	Winter wheat	Nov. 6, 1946	Aug. 12	Squareheads Master 13/4
1947	Spring wheat	April 18	Aug. 21	Atle

In 1940 the turnips, especially those on plots 1 and 2, were badly attacked by Finger and Toe disease.

In 1944 three varieties of swedes and eleven varieties of turnips were sown in strips down each plot. The turnips on all plots failed, as did also the swedes on plots 5 and 6; all plots were attacked by disease, plots 3 and 4 less severely than the rest.

In 1947 the wheat wintered badly, and it was decided to resow all of plots 1, 3 and 5 and the west side of plots 2, 4 and 6 with spring wheat.

A/4.2

		Produce per acre						
		O		M		C		
		Unmanured since 1848		Mineral Manure No nitrogen		Complete mineral and nitrogenous manure		
		5	6	3	4	1	2	
		Clover or Fallow		Clover or Fallow		Clover or Fallow		
Year	Crop		beans		beans		beans	
Twenty-third Course								
1936	Roots (Turnips)	tons	1.22	0.47	2.69	2.55	5.63	3.26
1937	Barley							
	Grain	cwt.	0.5	0.3	3.1	0.5	0.6	1.0
	Straw*	cwt.	3.4	2.1	2.5	4.7	2.7	3.4
1938	Clover hay	cwt.	-	8.3	-	29.1	-	26.4
1939	Wheat							
	Grain	cwt.	14.9	11.9	18.2	22.2	12.8	20.9
	Straw*	cwt.	26.3	19.9	32.9	36.6	24.9	33.2
Twenty-fourth Course								
1940	Root (Turnips)	tons	0.52	0.14	3.96	5.09	2.76	2.71
1941	Barley							
	Grain	cwt.	7.4	3.2	9.6	11.5	10.3	4.2
	Straw*	cwt.	11.9	10.8	16.6	20.2	12.9	18.6
1942	Clover hay	cwt.	-	10.0	-	39.9	-	32.9
1943	Wheat							
	Grain	cwt.	19.7	17.7	24.7	27.4	21.2	27.1
	Straw*	cwt.	30.3	29.2	39.4	41.7	34.6	42.4
Twenty-fifth Course								
1944	Roots (Swedes)	tons	Failed		5.26	5.01	3.53	2.09
1945	Barley							
	Grain	cwt.	12.4	9.5	19.8	20.9	24.9	20.6
	Straw*	cwt.	11.4	10.1	21.5	16.7	25.1	24.9
1946	Clover hay	cwt.	-	7.4	-	44.9	-	25.0
1947	Winter wheat							
	Grain	cwt.	-	7.0	-	16.0	-	12.3
	Straw*	cwt.	-	13.3	-	24.9	-	17.3
1947	Spring wheat							
	Grain	cwt.	12.8	10.4	20.3	18.6	18.5	16.8
	Straw*	cwt.	15.8	15.1	26.2	25.0	22.3	19.3

*Includes straw, cavings and chaff.