

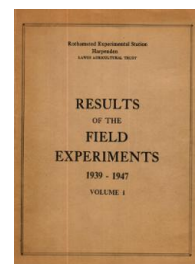
Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED
RESEARCH

Yields of the Field Experiments 1939-1947 Volume 1

[Full Table of Content](#)



BA/1 Two-course Rotation

Rothamsted Research

Rothamsted Research (1948) *BA/1 Two-course Rotation* ; Yields Of The Field Experiments 1939-1947 Volume 1, pp 58 - 67 - DOI: <https://doi.org/10.23637/ERADOC-1-145>

Ba/1.1

TWO COURSE ROTATION EXPERIMENT

Long Hoos (begun in 1942)

Cumulative Effects of Agricultural Salt

The experiment was designed to test the cumulative effects of agricultural salt and muriate of potash, and to compare two methods of application of the salt.

The rotation is 1st year Sugar beet, 2nd year Barley.

There are 2 series (one for each crop in any particular year), each consisting of 4 blocks of 12 plots each. Area of each plot in acres:

Series	Total	Sugar Beet	
		Harvested	
			Barley
1	0.0219	0.0190	0.0207
2	0.0200	0.0173	0.0189

Treatments: all combinations of

- (1) Agricultural salt (rates for sugar beet): None (0), $2\frac{1}{2}$ cwt. (Na 1), 5 cwt. (Na 2) and $7\frac{1}{2}$ cwt. (Na 3) per acre.
- (2) Muriate of potash: None (0), the equivalent of half the single dressing of salt (K1) (approximately 1 cwt. K_2O per acre), the equivalent of the double dressing of salt (K2), applied to sugar beet at sowing.
- (3) Time of application of salt: in seed bed before sowing (A), before ploughing during the winter (B).
- (4) Salt applied to sugar beet only (0), salt repeated at half rate on barley (R).

The following interactions are partially confounded with block differences:-

(A-B) x R; (3-2+1-0) Na x (A-B); (3-2+1-0) Na x R;

and the interactions of these with K.

Basal dressings, applied to all plots at sowing:

Barley: 0.3 cwt. N per acre as sulphate of ammonia
 Sugar beet: 0.8 cwt. N per acre as sulphate of ammonia
 0.6 cwt. P_2O_5 per acre as superphosphate.

Crop Notes

	Sugar beet: Klein E		Barley: Plumage Archer	
	Sown	Lifted	Sown	Harvested
1942	April 25	Dec. 2	(Series 2 grew preliminary wheat)	
1943	April 14	Nov. 12	March 13	Aug. 10
1944	April 22	Oct. 26, Nov. 23	March 8	Aug. 10
1945	April 12	Nov. 5	March 27	Aug. 8
1946	April 15	Nov. 22	March 21	Aug. 14
1947	April 25	Oct. 30	April 11	Aug. 11

Ba/1.2

In 1942, 1943, samples were taken at intervals from one end of each plot for physiological and chemical study. The yields given are corrected for the reduced area per plot. In 1944, 12 of the 48 plots of sugar beet were lifted Oct. 26th. This had an appreciable effect on tops and sugar percentage, which have been adjusted by means of a regression. There was no effect on the other results.

Ba/1.3

Two Course Rotation Experiment

		Sugar Beet					Year	
		Salt cwt.	1942	1943	1944	1945	1946	1947
		Roots (washed): tons per acre						
Muriate of potash K ₂ O cwt. per acre	0		14.98	15.46	8.51	16.18	15.34	5.92
	2.5		16.95	17.60	10.96	17.96	17.71	9.04
	5.0 (a)		17.12	17.63	10.61	17.15	16.86	9.33
	7.5		16.72	16.68	9.69	16.86	16.32	9.23
	Mean (b)		16.44	16.84	9.94	17.04	16.56	8.38
1.0	0		14.73	16.97	8.04	16.97	15.19	7.48
	2.5		16.08	17.03	11.25	16.88	17.08	8.50
	5.0 (a)		16.86	17.12	10.53	17.34	17.61	9.99
	7.5		17.61	16.08	11.34	16.39	17.16	9.74
	Mean (b)		16.32	16.80	10.29	16.90	16.76	8.93
2.0	0		15.68	16.87	9.34	16.57	16.93	7.54
	2.5		16.28	16.45	10.96	17.12	17.56	8.72
	5.0 (a)		16.65	16.91	10.28	17.55	17.21	9.26
	7.5		17.28	16.87	11.24	16.21	17.02	10.20
	Mean (b)		16.47	16.78	10.46	16.86	17.18	8.93
Salt applied Winter	2.5		16.04	17.43	10.71	17.27	17.66	8.60
	5.0 (d)		16.58	17.32	10.09	17.21	17.35	9.59
	7.5		17.10	16.23	11.10	16.63	16.24	10.08
	Mean (e)		16.57	16.99	10.63	17.04	17.08	9.42
In seed bed	2.5		16.83	16.62	11.40	17.37	17.24	8.91
	5.0 (d)		17.17	17.12	10.86	17.48	17.11	9.47
	7.5		17.31	16.86	10.41	16.35	17.43	9.36
	Mean (e)		17.10	16.87	10.89	17.07	17.26	9.25
Mean	0		15.13	16.43	8.63	16.57	15.82	6.98
	2.5		16.44	17.03	11.06	17.32	17.45	8.75
	5.0 (c)		16.88	17.22	10.47	17.35	17.23	9.53
	7.5		17.20	16.54	10.76	16.49	16.83	9.72
	Mean		16.41	16.81	10.23	16.93	16.83	8.74
Standard errors (28 d.f. in 1942, 22 d.f. in other years)	(a)		0.517	0.577	0.503	0.384	0.427	
	(b)		0.259	0.289	0.251	0.192	0.213	
	(c)		0.299	0.333	0.290	0.222	0.247	
	(d)		0.395	0.441	0.384	0.294	0.326	
	(e)		0.239	0.266	0.232	0.177	0.197	
	Per plot %age		1.035	1.154	1.005	0.769	0.854	

B/L.4

Sugar Beet

	Salt cwt. per acre	Year					
		1942	1943	1944	1945	1946	1947
		Sugar Percentage					
Muriate of potash K ₂ O cwt. per acre 0.0	0	18.19	18.44	16.24	18.03	17.04	19.34
	2.5	18.02	18.84	16.93	18.47	17.04	20.42
	5.0 (a)	18.54	18.85	17.02	18.81	17.14	21.07
	7.5	18.31	18.81	16.60	18.57	17.18	20.40
	Mean (b)	18.27	18.74	16.70	18.47	17.10	20.31
1.0	0	18.19	18.48	16.62	18.49	16.96	20.86
	2.5	18.30	18.97	16.84	18.46	16.79	20.48
	5.0 (a)	18.16	18.72	16.76	18.38	17.29	20.58
	7.5	17.98	18.60	16.66	18.64	17.16	20.54
	Mean (b)	18.16	18.69	16.72	18.49	17.05	20.62
2.0	0	18.26	18.78	16.68	18.57	17.49	20.48
	2.5	18.53	18.83	16.92	18.83	17.38	20.76
	5.0 (a)	18.38	18.84	16.78	18.58	17.21	20.43
	7.5	18.26	18.60	16.89	18.70	16.98	21.03
	Mean (b)	18.35	18.76	16.82	18.67	17.26	20.68
Salt applied Winter	2.5	18.30	19.00	16.85	18.64	17.08	20.33
	5.0 (d)	18.34	18.85	16.72	18.53	17.10	20.76
	7.5	18.08	18.61	16.83	18.63	17.10	20.94
	Mean (e)	18.24	18.82	16.80	18.60	17.09	20.68
In seed bed	2.5	18.27	18.76	16.94	18.53	17.05	20.78
	5.0 (d)	18.37	18.76	16.98	18.65	17.33	20.63
	7.5	18.28	18.73	16.60	18.65	17.12	20.38
	Mean (e)	18.31	18.75	16.84	18.61	17.17	20.60
Mean	0	18.21	18.57	16.51	18.36	17.16	20.23
	2.5	18.28	18.88	16.90	18.59	17.07	20.55
	5.0 (c)	18.36	18.80	16.85	18.59	17.21	20.69
	7.5	18.18	18.67	16.72	18.64	17.11	20.66
	Mean	18.26	18.73	16.74	18.54	17.14	20.54
Standard errors (28 d.f. in 1942, 21 d.f. in 1944, 22 d.f. in other years)	(a)	0.180		0.220	0.165	0.262	
	(b)	0.090		0.110	0.082	0.131	
	(c)	0.104		0.127	0.095	0.151	
	(d)	0.137		0.168	0.126	0.200	
	(e)	0.083		0.102	0.076	0.121	
	Per plot	0.360		0.441	0.329	0.524	

Ba/1.5

Two Course Rotation Experiment

		Sugar Beet						
		Salt	Year					
		cwt. per acre	1942	1943	1944	1945	1946	1947
Muriate of potash K ₂ O cwt. per acre	0.0	0	54.5	57.0	27.2	58.3	52.3	23.7
		2.5	61.1	66.3	36.6	66.3	60.2	37.2
		5.0 (a)	63.5	66.5	36.1	64.5	57.9	39.5
		7.5	61.2	62.7	32.2	62.7	56.0	37.9
		Mean (b)	60.1	63.1	33.0	63.0	56.6	34.6
	1.0	0	53.6	62.7	27.1	62.8	51.5	31.3
		2.5	58.8	64.6	37.4	62.3	57.5	35.1
		5.0 (a)	61.2	64.1	35.8	63.8	60.9	41.1
		7.5	63.3	59.8	37.7	61.1	58.8	40.4
		Mean (b)	59.2	62.8	34.5	62.5	57.2	37.0
	2.0	0	57.3	63.3	31.6	61.5	59.2	31.1
		2.5	60.4	62.0	37.1	64.4	61.0	36.5
		5.0 (a)	61.1	63.9	34.5	65.2	59.2	38.4
		7.5	63.1	62.8	37.9	60.6	57.8	42.9
		Mean (b)	60.5	63.0	35.3	62.9	59.3	37.2
	Salt applied Winter	2.5	58.6	66.2	35.8	64.3	60.3	35.4
5.0 (d)		60.8	65.3	34.1	63.9	59.4	40.0	
7.5		61.8	60.3	37.3	61.7	55.5	42.5	
Mean (e)		60.4	63.9	35.7	63.3	58.4	39.3	
In seed bed	2.5	61.6	62.4	38.3	64.4	58.9	37.2	
	5.0 (d)	63.1	64.3	36.9	65.1	59.3	39.4	
	7.5	63.3	63.2	34.6	61.3	59.7	38.3	
	Mean (e)	62.6	63.3	36.6	63.6	59.3	38.3	
Mean	0	55.1	61.0	28.6	60.9	54.3	28.7	
	2.5	60.1	64.3	37.0	64.3	59.6	36.3	
	5.0 (c)	61.9	64.8	35.5	64.5	59.3	39.7	
	7.5	62.5	61.8	35.9	61.5	57.5	40.4	
	Mean	59.9	63.0	34.3	62.8	57.7	36.3	
Standard errors (28 d.f. in 1942, 22 d.f. in other years)	(a)	1.85	2.17	1.74	1.52	1.91	2.50	
	(b)	0.92	1.08	0.87	0.76	0.96	1.25	
	(c)	1.07	1.25	1.00	0.87	1.10	1.44	
	(d)	1.41	1.66	1.32	1.16	1.46	1.91	
	(e)	0.85	1.00	0.80	0.71	0.88	1.15	
	Per plot %age	3.69	4.34	3.47	3.03	3.82	5.00	
		6.2	6.9	10.1	4.8	6.6	13.8	

N

Ba/1. 6

		Sugar Beet							
		Salt cwt. per acre	1942	1943	1944	1945	1946	1947	
		Tops: tons per acre							
Muriate of potash K ₂ O cwt. per acre	0		10.06	9.55	10.69	12.20	17.05	4.59	
	2.5		11.23	10.76	13.20	11.82	18.01	6.94	
	0.0	5.0 (a)	10.56	11.55	13.01	11.80	17.71	7.23	
		7.5	11.42	11.60	12.52	12.74	17.21	7.01	
		Mean (b)	10.82	10.86	12.36	12.14	17.50	6.44	
	1.0	0		10.41	10.62	12.40	11.89	17.73	5.81
		2.5		12.19	11.10	13.80	13.58	17.73	6.40
			5.0 (a)	10.20	10.50	11.98	12.43	16.65	7.66
			7.5	13.30	10.74	14.27	12.20	18.18	7.26
			Mean (b)	11.53	10.74	13.11	12.52	17.57	6.78
	2.0	0		10.43	10.24	11.70	11.76	17.31	5.83
		2.5		11.74	10.17	12.06	12.05	16.93	6.59
			5.0 (a)	11.42	10.34	11.49	11.49	17.07	7.30
			7.5	11.77	11.12	12.63	11.45	16.49	7.48
			Mean (b)	11.34	10.47	11.97	11.69	16.95	6.80
Salt applied Winter	2.5		11.55	10.49	12.69	12.08	17.83	6.63	
		5.0 (d)	10.58	10.80	12.47	11.62	17.54	7.52	
		7.5	12.17	11.06	13.89	11.91	17.48	7.62	
		Mean (e)	11.43	10.78	13.02	11.87	17.62	7.26	
In seed bed	2.5		11.88	10.87	13.34	12.89	17.29	6.65	
		5.0 (d)	10.87	10.79	11.86	12.19	16.75	7.27	
		7.5	12.17	11.25	12.39	12.35	17.10	6.88	
		Mean (e)	11.64	10.97	12.53	12.48	17.05	6.93	
Mean	0		10.30	10.14	11.59	11.95	17.36	5.41	
		2.5 (c)	11.72	10.68	13.02	12.48	17.56	6.64	
		5.0	10.73	10.80	12.16	11.91	17.14	7.40	
		7.5	12.17	11.15	13.14	12.13	17.29	7.25	
		Mean	11.23	10.69	12.48	12.12	17.34	6.68	
Standard errors (28 d.f. in 1942, 21 d.f. in 1944, 22 d.f. in other years)	(a)		0.569	0.600	0.680	0.382	0.813	0.353	
	(b)		0.334	0.300	0.340	0.191	0.407	0.177	
	(c)		0.386	0.346	0.392	0.221	0.470	0.204	
	(d)		0.511	0.458	0.519	0.292	0.621	0.270	
	(e)		0.309	0.277	0.314	0.176	0.375	0.163	
	Per plot %age		1.338	1.200	1.359	0.764	1.627	0.707	
		11.9	11.2	10.9	6.3	9.4	10.6		

Two Course Rotation Experiment

Ba/1.7



		Sugar Beet						
		Salt cwt. per acre	1942	1943	1944	1945	1946 [‡]	1947
		Plant Number: thousands per acre						
Muriate of potash K ₂ O cwt. per acre	0		25.9	23.5	27.7	27.6		16.3
	2.5		25.3	25.6	29.1	28.5		19.5
	5.0 (a)		26.0	25.3	27.8	28.4		19.1
	7.5		26.3	24.5	24.6	28.1		19.1
	Mean (b)		25.9	24.7	27.3	28.2		18.5
1.0	0		25.2	23.9	27.9	28.3		19.2
	2.5		23.4	24.5	27.7	27.7		19.7
	5.0 (a)		27.4	24.1	29.2	28.6		21.2
	7.5		27.3	22.6	26.7	27.9		20.6
	Mean (b)		25.8	23.8	27.9	28.1		20.2
2.0	0		24.8	25.1	27.8	28.2		18.1
	2.5		24.5	22.7	27.7	27.9		18.8
	5.0 (a)		27.1	24.0	28.5	27.6		19.7
	7.5		26.5	23.5	27.7	27.0		22.1
	Mean (b)		25.7	23.8	27.9	27.7		19.7
Salt applied Winter	2.5		24.8	24.1	28.3	27.8		18.8
	5.0 (d)		27.3	24.3	28.7	27.8		19.6
	7.5		26.5	23.8	26.2	27.9		21.4
	Mean (e)		26.2	24.1	27.7	27.8		19.9
In seed bed	2.5		24.0	24.4	28.0	28.3		19.8
	5.0 (d)		26.3	24.6	28.4	28.6		20.4
	7.5		26.9	23.2	26.4	27.4		19.8
	Mean (e)		25.7	24.1	27.6	28.1		20.0
Mean	0		25.3	24.1	27.8	28.0		17.9
	2.5		24.4	24.3	28.2	28.0		19.3
	5.0 (c)		26.8	24.5	28.5	28.2		20.0
	7.5		26.7	23.5	26.3	27.7		20.6
	Mean		25.8	24.1	27.7	28.0		19.5
In seed bed	2.5		24.0	24.4	28.0	28.3		19.8
	5.0 (d)		26.3	24.6	28.4	28.6		20.4
	7.5		26.9	23.2	26.4	27.4		19.8
	Mean (e)		25.7	24.1	27.6	28.1		20.0
	Standard errors (28 d.f. in 1942, 22 d.f. in other years)	(a)		0.93	1.00	0.94	0.56	
(b)			0.46	0.50	0.47	0.28		
(c)			0.54	0.58	0.55	0.32		
(d)			0.71	0.76	0.72	0.43		
(e)			0.43	0.46	0.44	0.26		
Per plot %age			1.86	2.00	1.89	1.12		

‡ The plant numbers were not counted in 1946.

Barley

		Salt applied in previous year	1943	1944	1945	1946	1947	
		cwt. per acre						
Muriate of potash applied in previous year K ₂ O cwt. per acre	0.0	0	24.0	30.0	27.1	32.6	23.1	
		2.5	24.9	31.1	27.8	31.9	23.9	
		5.0 (a)	23.8	30.2	27.5	33.0	22.1	
		7.5	23.7	29.8	26.5	32.0	21.7	
		Mean (b)	24.1	30.3	27.2	32.4	22.7	
	1.0	0	22.5	30.3	26.4	34.3	23.0	
		2.5	26.9	29.6	29.4	32.7	26.3	
		5.0 (a)	22.7	30.5	26.6	35.5	22.4	
		7.5	26.6	30.1	29.5	32.4	24.7	
		Mean (b)	24.7	30.1	28.0	33.7	24.1	
	2.0	0	23.3	29.4	26.1	32.8	23.7	
		2.5	25.7	30.7	28.0	33.0	24.1	
		5.0 (a)	23.9	29.4	27.2	33.3	22.7	
		7.5	26.4	30.7	29.3	31.9	23.6	
		Mean (b)	24.8	30.0	27.6	32.8	23.5	
	Salt in current year	None	2.5	24.4	30.8	27.6	33.2	23.4
			5.0 (c)	22.7	30.0	26.4	33.4	22.7
			7.5	26.1	29.8	28.7	31.3	24.5
			Mean (d)	24.4	30.2	27.6	32.6	23.5
		Half Rate	2.5	27.3	30.1	29.1	31.9	26.2
5.0 (c)			24.2	30.1	27.8	34.5	22.0	
7.5			25.1	30.5	28.2	32.9	22.2	
Mean (d)			25.5	30.2	28.4	33.1	23.5	
Salt applied Winter		Winter	2.5	25.1	30.0	27.9	32.7	25.4
			5.0 (c)	23.2	30.0	26.8	34.3	22.4
	7.5		27.2	30.5	29.5	32.4	21.7	
	Mean (d)		25.2	30.2	28.1	33.1	23.2	
	In seed bed	2.5	26.6	31.0	28.9	32.4	24.2	
		5.0 (c)	23.8	30.1	27.4	33.5	22.3	
		7.5	23.9	29.8	27.4	31.8	25.0	
		Mean (d)	24.8	30.3	27.9	32.6	23.8	
	Mean	0	23.3	29.9	26.5	33.2	23.3	
		2.5	25.8	30.5	28.4	32.5	24.8	
5.0 (e)		23.5	30.0	27.1	33.9	22.4		
7.5		25.6	30.2	28.4	32.1	23.3		
Mean		24.5	30.1	27.6	32.9	23.4		
Standard errors (22 d.f.)	(a)	0.92	0.68	0.66	1.43	0.82		
	(b)	0.46	0.34	0.33	0.72	0.41		
	(c)	0.71	0.52	0.50	1.09	0.63		
	(d)	0.43	0.32	0.31	0.66	0.38		
	(e)	0.53	0.40	0.38	0.83	0.47		
	Per plot %age	1.85 7.5	1.37 4.6	1.31 4.8	2.86 8.7	1.64 7.0		

Two Course Rotation Experiment

Ba/1.9

Barley

		Salt applied in previous year	Year				
		cwt. per acre	1943	1944	1945	1946	1947
Muriate of potash applied in previous year K ₂ O cwt. per acre	0.0	0	27.9	28.9	31.7	36.5	21.2
		2.5	25.7	28.9	33.0	36.6	22.0
		5.0 (a)	25.8	27.3	32.7	36.3	21.1
		7.5	24.6	28.4	30.2	37.5	20.9
		Mean (b)	26.0	28.4	31.9	36.7	21.3
	1.0	0	23.9	28.9	32.2	36.2	22.2
		2.5	29.4	28.4	34.3	38.3	24.4
		5.0 (a)	24.3	28.4	32.2	39.0	21.8
		7.5	27.6	29.2	34.8	37.3	24.3
		Mean (b)	26.3	28.7	33.4	37.7	23.2
	2.0	0	24.8	27.4	31.0	38.0	22.1
		2.5	27.1	29.0	32.9	37.8	22.7
		5.0 (a)	25.4	27.6	32.8	37.7	21.5
		7.5	27.8	27.6	34.5	38.6	23.0
		Mean (b)	26.3	27.9	32.8	38.0	22.3
Salt in current year	None	2.5	25.7	29.1	32.6	37.9	22.2
		5.0 (c)	24.5	28.3	32.4	37.9	22.0
		7.5	27.2	28.3	34.1	37.7	23.8
		Mean (d)	25.8	28.6	33.0	37.8	22.7
	Half rate	2.5	29.1	28.5	34.1	37.3	23.8
		5.0 (c)	25.8	27.3	32.7	37.4	21.0
		7.5	26.2	28.5	32.2	37.8	21.6
		Mean (d)	27.0	28.1	33.0	37.5	22.1
Salt applied Winter Winter	Winter	2.5	26.9	28.4	33.1	37.2	23.0
		5.0 (c)	24.8	28.2	32.5	38.6	22.1
		7.5	27.8	29.0	34.4	38.5	20.5
		Mean (d)	26.5	28.5	33.4	38.1	21.9
	In seed bed	2.5	27.9	29.2	33.7	37.9	23.1
		5.0 (c)	25.5	27.4	32.6	36.7	20.8
		7.5	25.6	27.8	31.9	37.1	24.9
		Mean (d)	26.4	28.1	32.7	37.2	22.9
Mean	0	25.5	28.4	31.6	36.9	21.8	
	2.5	27.4	28.8	33.4	37.6	23.0	
	5.0 (e)	25.2	27.8	32.6	37.7	21.5	
	7.5	26.7	28.4	33.2	37.8	22.7	
	Mean	26.2	28.4	32.7	37.5	22.3	

Standard errors (22 d.f.)	(a)	0.80	1.25
	(b)	0.39	0.62
	(c)	0.61	0.95
	(d)	0.37	0.58
	(e)	0.46	0.72
Per plot		1.61	2.50
%age		4.9	6.7

TABLE 1

Yield of grain and straw from 100 lb of seed

Year	Grain yield (lb)		Straw yield (lb)		Total yield (lb)	Grain yield as % of total
	Actual	Mean	Actual	Mean		
1911	38.5	38.5	41.7	41.7	80.2	48.7
1912	38.0	38.0	42.0	42.0	80.0	47.5
1913	38.7	38.7	42.3	42.3	81.0	49.1
1914	37.3	37.3	40.2	40.2	77.5	48.1
1915	38.7	38.7	41.9	41.9	80.6	48.1
1916	38.3	38.3	41.3	41.3	79.6	48.0
1917	38.4	38.4	41.4	41.4	79.8	48.1
1918	38.1	38.1	41.1	41.1	79.2	48.1
1919	38.2	38.2	41.2	41.2	79.4	48.1
1920	38.3	38.3	41.3	41.3	79.6	48.1
1921	38.4	38.4	41.4	41.4	79.8	48.1
1922	38.5	38.5	41.5	41.5	80.0	48.1
1923	38.6	38.6	41.6	41.6	80.2	48.1
1924	38.7	38.7	41.7	41.7	80.4	48.1
1925	38.8	38.8	41.8	41.8	80.6	48.1
1926	38.9	38.9	41.9	41.9	81.0	48.1
1927	39.0	39.0	42.0	42.0	81.0	48.1
1928	39.1	39.1	42.1	42.1	81.2	48.1
1929	39.2	39.2	42.2	42.2	81.4	48.1
1930	39.3	39.3	42.3	42.3	81.6	48.1
1931	39.4	39.4	42.4	42.4	81.8	48.1
1932	39.5	39.5	42.5	42.5	82.0	48.1
1933	39.6	39.6	42.6	42.6	82.2	48.1
1934	39.7	39.7	42.7	42.7	82.4	48.1
1935	39.8	39.8	42.8	42.8	82.6	48.1
1936	39.9	39.9	42.9	42.9	82.8	48.1
1937	40.0	40.0	43.0	43.0	83.0	48.1
1938	40.1	40.1	43.1	43.1	83.2	48.1
1939	40.2	40.2	43.2	43.2	83.4	48.1
1940	40.3	40.3	43.3	43.3	83.6	48.1
1941	40.4	40.4	43.4	43.4	83.8	48.1
1942	40.5	40.5	43.5	43.5	84.0	48.1
1943	40.6	40.6	43.6	43.6	84.2	48.1
1944	40.7	40.7	43.7	43.7	84.4	48.1
1945	40.8	40.8	43.8	43.8	84.6	48.1
1946	40.9	40.9	43.9	43.9	84.8	48.1
1947	41.0	41.0	44.0	44.0	85.0	48.1
1948	41.1	41.1	44.1	44.1	85.2	48.1
1949	41.2	41.2	44.2	44.2	85.4	48.1
1950	41.3	41.3	44.3	44.3	85.6	48.1
1951	41.4	41.4	44.4	44.4	85.8	48.1
1952	41.5	41.5	44.5	44.5	86.0	48.1
1953	41.6	41.6	44.6	44.6	86.2	48.1
1954	41.7	41.7	44.7	44.7	86.4	48.1
1955	41.8	41.8	44.8	44.8	86.6	48.1
1956	41.9	41.9	44.9	44.9	86.8	48.1
1957	42.0	42.0	45.0	45.0	87.0	48.1
1958	42.1	42.1	45.1	45.1	87.2	48.1
1959	42.2	42.2	45.2	45.2	87.4	48.1
1960	42.3	42.3	45.3	45.3	87.6	48.1
1961	42.4	42.4	45.4	45.4	87.8	48.1
1962	42.5	42.5	45.5	45.5	88.0	48.1
1963	42.6	42.6	45.6	45.6	88.2	48.1
1964	42.7	42.7	45.7	45.7	88.4	48.1
1965	42.8	42.8	45.8	45.8	88.6	48.1
1966	42.9	42.9	45.9	45.9	88.8	48.1
1967	43.0	43.0	46.0	46.0	89.0	48.1
1968	43.1	43.1	46.1	46.1	89.2	48.1
1969	43.2	43.2	46.2	46.2	89.4	48.1
1970	43.3	43.3	46.3	46.3	89.6	48.1
1971	43.4	43.4	46.4	46.4	89.8	48.1
1972	43.5	43.5	46.5	46.5	90.0	48.1
1973	43.6	43.6	46.6	46.6	90.2	48.1
1974	43.7	43.7	46.7	46.7	90.4	48.1
1975	43.8	43.8	46.8	46.8	90.6	48.1
1976	43.9	43.9	46.9	46.9	90.8	48.1
1977	44.0	44.0	47.0	47.0	91.0	48.1
1978	44.1	44.1	47.1	47.1	91.2	48.1
1979	44.2	44.2	47.2	47.2	91.4	48.1
1980	44.3	44.3	47.3	47.3	91.6	48.1
1981	44.4	44.4	47.4	47.4	91.8	48.1
1982	44.5	44.5	47.5	47.5	92.0	48.1
1983	44.6	44.6	47.6	47.6	92.2	48.1
1984	44.7	44.7	47.7	47.7	92.4	48.1
1985	44.8	44.8	47.8	47.8	92.6	48.1
1986	44.9	44.9	47.9	47.9	92.8	48.1
1987	45.0	45.0	48.0	48.0	93.0	48.1
1988	45.1	45.1	48.1	48.1	93.2	48.1
1989	45.2	45.2	48.2	48.2	93.4	48.1
1990	45.3	45.3	48.3	48.3	93.6	48.1
1991	45.4	45.4	48.4	48.4	93.8	48.1
1992	45.5	45.5	48.5	48.5	94.0	48.1
1993	45.6	45.6	48.6	48.6	94.2	48.1
1994	45.7	45.7	48.7	48.7	94.4	48.1
1995	45.8	45.8	48.8	48.8	94.6	48.1
1996	45.9	45.9	48.9	48.9	94.8	48.1
1997	46.0	46.0	49.0	49.0	95.0	48.1
1998	46.1	46.1	49.1	49.1	95.2	48.1
1999	46.2	46.2	49.2	49.2	95.4	48.1
2000	46.3	46.3	49.3	49.3	95.6	48.1
2001	46.4	46.4	49.4	49.4	95.8	48.1
2002	46.5	46.5	49.5	49.5	96.0	48.1
2003	46.6	46.6	49.6	49.6	96.2	48.1
2004	46.7	46.7	49.7	49.7	96.4	48.1
2005	46.8	46.8	49.8	49.8	96.6	48.1
2006	46.9	46.9	49.9	49.9	96.8	48.1
2007	47.0	47.0	50.0	50.0	97.0	48.1
2008	47.1	47.1	50.1	50.1	97.2	48.1
2009	47.2	47.2	50.2	50.2	97.4	48.1
2010	47.3	47.3	50.3	50.3	97.6	48.1
2011	47.4	47.4	50.4	50.4	97.8	48.1
2012	47.5	47.5	50.5	50.5	98.0	48.1
2013	47.6	47.6	50.6	50.6	98.2	48.1
2014	47.7	47.7	50.7	50.7	98.4	48.1
2015	47.8	47.8	50.8	50.8	98.6	48.1
2016	47.9	47.9	50.9	50.9	98.8	48.1
2017	48.0	48.0	51.0	51.0	99.0	48.1
2018	48.1	48.1	51.1	51.1	99.2	48.1
2019	48.2	48.2	51.2	51.2	99.4	48.1
2020	48.3	48.3	51.3	51.3	99.6	48.1
2021	48.4	48.4	51.4	51.4	99.8	48.1
2022	48.5	48.5	51.5	51.5	100.0	48.1