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Use of Fertilisers in England and Wales, 1974

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Use of Fertilisers in England and Wales, 1974

B. M. CHURCH

Since 1941, information about the use of fertilisers on individual crops has been obtained from a series of sample surveys done by Soil Scientists of the Agricultural Development and Advisory Service (formerly NAAS) in collaboration with the Statistics Department at Rothamsted and, since 1957, representatives of the Fertiliser Manufacturers Association have made a major contribution to this work. A fully representative sample of about 600 farms has been surveyed each year since 1969 (Church & Webber, 1971) and in 1974, with the lapse of independent data from subsidy statistics, the sample was increased to 1400 farms.

The information is used mainly to forecast requirements by following trends in use, as a guide in advisory work and in planning relevant experiments, and for national farm accounts. Summaries of the results are reported to the ADAS Soil Scientists' Soil Analysis and Fertiliser Committee and individual reports are available on request to the Regional Administration Division of the Ministry of Agriculture. Basic summary tables for 1974 are on the following pages. Table 2 gives estimates of the average use of fertilisers on individual crops in England and Wales and Tables 3-5 the proportions of crop area getting different total amounts of N, P and K fertiliser.

The main change in recent years has been an increase of about 7.5% per year in the use of N on grassland. Use of P and K, and of N on tillage crops, has changed little since 1969, but rather less P was used on all crops (particularly grassland) in 1974. (See Table 1.)

TABLE 1
Fertiliser use on tillage, leys and permanent grass, 1969-74
(kg/ha)

	Tillage			Leys			P.G.			All crops & grass		
	N	P ₂ O ₅	K ₂ O	N	P ₂ O ₅	K ₂ O	N	P ₂ O ₅	K ₂ O	N	P ₂ O ₅	K ₂ O
1969	82	52	60	92	45	31	48	28	18	72	42	40
1970	88	56	61	106	42	31	51	24	18	78	41	40
1971	90	54	59	98	38	25	51	28	15	78	41	39
1972	91	56	62	118	39	28	58	25	15	84	42	39
1973	89	54	60	124	42	31	59	24	15	84	41	38
1974	85	51	57	132	36	29	67	22	15	89	38	37

REFERENCE

CHURCH, B. M. & WEBBER, J. (1971) Fertiliser practice in England and Wales: a new series of surveys. *Journal of the Science of Food and Agriculture* 22, 1-7.

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TABLE 2
Fertiliser use in England and Wales, 1974

Fields	Hectares ('000)	Overall* kg/ha			% Area receiving				Actual* kg/ha		
		N	P ₂ O ₅	K ₂ O	N	P	K	FYMT†	N	P ₂ O ₅	K ₂ O
Spring wheat	187	69	38	37	95	88	85	—	73	44	44
Winter wheat	2198	90	45	37	92	79	73	—	98	57	51
3034	1663	73	39	39	97	94	91	—	75	41	43
Spring barley	420	91	51	46	98	93	89	—	93	55	51
Winter barley	303	58	38	34	93	91	89	—	63	42	39
Spring oats	184	63	51	47	96	93	93	—	71	55	51
Winter oats	106	37	49	34	86	84	78	—	58	59	44
Mixed corn	36	11	29	22	79	50	47	—	125	77	76
Rye	60	115	67	66	92	87	87	—	160	171	193
Maize	19	159	170	193	99	99	100	—	177	185	246
Early potatoes	368	125	185	246	100	100	100	—	148	98	183
Maincrop potatoes	189	148	92	182	100	94	100	—	76	98	83
Sugar beet	222	64	86	68	84	87	82	—	129	100	128
Swedes and Turnips (stock)	48	116	86	113	90	86	88	—	110	63	64
Mangolds	289	105	52	51	95	82	79	—	116	84	58
Kale and cow cabbage	84	112	79	52	96	94	90	—	57	65	62
Rape for stockfeed	154	9	23	20	16	35	32	—	85	69	69
Beans for stockfeed	26	67	54	53	79	78	78	—	29	49	57
Other stockfeed	91	8	26	31	27	52	54	—	22	49	50
Peas for human consumption	185	11	25	26	52	52	52	—	150	86	95
Broad beans	15	138	86	95	92	100	100	—	231	125	198
Runner and French beans	53	17	228	124	99	99	99	—	154	108	169
Brussels sprouts	48	19	153	151	100	90	89	—	182	140	206
Cabbages	25	10	178	130	98	93	93	—	111	90	164
Cauliflower	33	9	85	69	76	76	76	—	135	129	199
Carrots	25	6	126	127	93	98	98	—	104	61	91
Onions	30	70	37	77	67	60	85	—	128	45	78
Small fruit	88	46	104	22	82	49	64	—	163	89	186
Top fruit	26	9	158	75	97	84	95	—	187	65	64
Hops	29	13	187	65	100	100	95	—	93	59	68
Oil seed rape	9170	85	51	57	92	87	84	—	114	71	51
All tillage	77	29	35	24	80	49	48	—	153	57	48
One year leys	3754	132	36	29	86	63	60	—	108	52	39
Two to seven year leys	4093	67	22	15	61	42	39	—	110	57	58
Permanent grass	17094	89	38	37	80	67	64	—	—	—	—
All crops and grass											

* The average application of any fertiliser component over all fields, including those receiving none of that component, is termed 'overall'. The average, excluding fields with none of the component, is termed 'actual'.
† Not presently available.

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TABLE 3
Percentages of crop area getting different amounts of N (kg/ha)

Fields	0	<25	25-	50-	75-	100-	125-	150-	200-	250-	300-	400+
Spring wheat	5	2	14	24	39	14	1	0	0	0	0	0
Winter wheat	8	6	2	11	25	30	12	4	1	0	0	0
Spring barley	3	2	12	26	45	9	3	1	0	0	0	0
Winter barley	2	3	4	15	31	32	11	2	0	0	0	0
Spring oats	7	4	22	34	26	6	1	0	0	0	0	0
Winter oats	4	10	11	31	29	13	1	2	0	0	0	0
Mixed corn	14	12	33	14	19	1	6	1	0	0	0	0
Rye	21	3	1	13	34	8	19	0	0	2	0	0
Maize	8	0	0	5	14	23	32	16	3	0	0	0
Early potatoes	1	2	0	0	9	11	16	52	0	6	3	0
Maincrop potatoes	0	0	1	1	4	5	9	61	12	6	1	0
Sugar beet	0	0	1	1	5	11	32	43	7	0	0	0
Swedes and turnips (stock)	16	4	18	22	15	15	6	5	0	0	0	0
Mangolds	10	10	8	5	2	4	20	35	3	1	4	0
Kale and cow cabbage	5	1	8	14	22	14	17	14	3	1	0	1
Rape for stockfeed	4	1	9	21	15	9	10	16	14	0	0	0
Beans for stockfeed	84	5	3	1	3	2	0	1	0	0	0	0
Other stockfeed	21	3	9	19	23	7	14	2	2	0	0	0
Peas for human consumption	73	15	7	5	0	0	0	0	0	0	0	0
Broad beans	48	46	6	0	0	0	0	0	0	0	0	0
Runner and French beans	8	1	1	3	5	0	24	57	0	1	1	0
Brussels sprouts	1	0	0	0	10	0	7	30	2	11	39	0
Cabbages	0	0	0	5	13	9	5	58	8	0	2	0
Cauliflower	2	0	0	5	13	6	10	20	27	9	7	0
Carrots	24	0	4	0	31	18	4	19	0	0	0	0
Onions	7	0	2	4	35	11	6	12	23	1	0	0
Small fruit	33	9	9	0	3	3	32	8	1	1	0	0
Top fruit	18	2	1	4	11	17	29	9	9	0	0	0
Hops	3	0	0	0	1	16	25	20	34	1	0	0
Oil seed rape	0	0	0	0	2	5	12	49	24	8	0	0
All tillage	8	3	8	17	30	15	8	7	2	0	0	0
One year leys	20	0	15	21	11	9	8	6	2	5	5	0
Two to seven year leys	14	1	9	16	12	6	9	10	6	6	7	4
Permanent grass	39	2	11	16	11	3	4	5	3	3	2	1
All crops and grass	20	2	9	17	20	9	7	7	3	2	2	1

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TABLE 4

Percentages of crop area getting different amounts of P_2O_5 (kg/ha)

Fields	0	<25	25-	50-	75-	100-	125-	150-	200-	250-	300-	400+
Spring wheat	12	4	60	21	1	0	0	1	0	0	0	0
Winter wheat	21	1	30	39	6	0	1	1	1	0	0	0
Spring barley	6	5	67	19	2	0	0	0	0	0	0	0
Winter barley	7	3	34	45	7	0	1	2	0	0	0	0
Spring oats	9	11	59	15	2	0	0	1	1	0	0	0
Winter oats	7	3	32	49	7	0	0	2	0	0	0	0
Mixed corn	16	3	46	21	3	3	0	5	3	0	0	0
Rye	50	0	26	17	2	0	0	2	3	0	0	0
Maize	36	0	11	35	24	14	0	0	3	0	0	0
Early potatoes	1	0	2	1	10	8	17	46	2	5	8	1
Maincrop potatoes	75	0	1	2	4	5	4	55	15	12	1	0
Sugar beet	472	0	1	26	31	18	8	9	0	1	0	0
Swedes and turnips (stock)	222	13	19	20	8	10	8	11	1	2	3	0
Mangolds	48	10	7	8	22	9	8	19	2	0	2	0
Kale and cow cabbage	289	5	25	27	16	4	1	3	0	0	1	0
Rape for stockfeed	84	6	30	32	6	2	3	4	9	3	1	0
Beans for stockfeed	154	2	10	16	3	1	1	3	0	0	0	0
Other stockfeed	91	22	20	23	20	4	5	2	1	0	0	0
Peas for human consumption	185	5	23	19	3	0	1	0	1	0	0	0
Broad beans	15	0	6	46	0	0	0	0	0	0	0	0
Runner and French beans	27	0	1	17	66	10	4	1	0	0	1	0
Brussels sprouts	53	0	0	10	23	28	19	12	1	0	5	0
Cabbages	48	10	0	10	40	11	8	18	0	0	2	0
Cauliflower	25	7	4	0	30	14	3	23	13	5	0	0
Carrots	33	24	4	6	40	25	0	1	0	0	0	0
Onions	25	0	0	8	26	14	6	38	5	0	0	0
Small fruit	30	2	0	0	16	1	1	1	0	0	0	0
Top fruit	88	51	12	12	10	0	0	0	0	0	0	0
Hops	26	16	0	34	31	8	7	1	1	0	0	0
Oil seed rape	29	0	28	53	13	0	0	6	0	0	0	0
All tillage	9170	13	43	25	6	2	1	4	1	1	0	0
One year leys	77	51	20	4	1	0	10	3	2	0	0	0
Two to seven year leys	3754	37	32	13	3	1	1	3	1	0	0	0
Permanent grass	4093	58	22	5	2	1	1	2	1	0	0	0
All crops and grass	17094	33	34	16	4	2	1	3	1	0	0	0

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TABLE 5

Percentages of crop area getting different amounts of K₂O (kg/ha)

Fields	0	<25	25-	50-	75-	100-	125-	150-	200-	250-	300-	400+
Spring wheat	15	4	53	26	2	1	0	0	0	0	0	0
Winter wheat	27	2	35	31	5	0	0	0	0	0	0	0
Spring barley	3034	9	62	20	4	0	0	0	0	0	0	0
Winter barley	420	11	41	38	6	0	1	0	0	0	0	0
Spring oats	303	11	59	17	3	0	0	0	0	0	0	0
Winter oats	184	7	44	38	5	1	1	0	0	0	0	0
Mixed corn	106	22	3	25	6	0	0	0	0	0	0	0
Rye	36	53	0	12	2	5	0	0	0	0	0	0
Maize	60	13	11	35	24	10	4	0	0	0	0	0
Early potatoes	75	0	2	0	6	10	11	15	25	29	2	0
Maincrop potatoes	368	0	1	1	3	2	0	18	19	34	22	1
Sugar beet	472	0	1	3	7	10	4	29	35	7	3	0
Swedes and turnips (stock)	222	18	21	18	14	11	3	8	3	0	0	0
Mangolds	48	12	9	8	16	8	2	18	20	1	2	0
Kale and cow cabbage	289	21	24	26	15	4	2	3	1	0	0	0
Rape for stockfeed	84	10	7	34	9	1	2	0	4	0	0	0
Beans for stockfeed	154	68	1	13	2	2	1	1	1	0	0	0
Other stockfeed	91	22	3	25	14	6	8	1	0	0	0	0
Peas for human consumption	185	46	12	29	5	4	0	1	0	0	0	0
Broad beans	15	48	4	48	0	0	0	0	0	0	0	0
Runner and French beans	27	0	0	23	57	3	6	4	7	1	0	0
Brussels sprouts	53	1	0	1	12	5	6	9	54	7	0	0
Cabbages	48	11	0	1	4	13	10	29	19	10	5	0
Cauliflower	25	7	0	5	6	0	2	29	12	20	3	0
Carrots	33	24	1	4	10	6	11	15	18	1	17	0
Onions	25	2	0	4	2	3	0	44	29	23	4	0
Small fruit	30	15	7	28	27	7	2	10	1	0	0	0
Top fruit	88	36	2	16	24	4	3	5	0	0	0	0
Hops	26	5	0	0	7	0	26	16	44	1	2	0
Oil seed rape	29	5	16	65	9	0	0	6	0	0	0	0
All tillage	9170	16	42	23	6	1	1	3	3	2	1	0
One year leys	77	52	7	7	1	8	1	0	0	0	0	0
Two to seven year leys	3754	40	32	12	5	2	2	1	0	0	0	0
Permanent grass	4093	61	22	5	2	1	0	0	0	0	0	0
All crops and grass	17094	36	33	14	4	1	1	2	2	1	0	0