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Use of Fertilisers in England and Wales, 1974

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Use of Fertilisers in England and Wales, 1974

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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	N	P ₂ O ₅	K ₂ O
Spring wheat	187	59	69	38	37	95	88	85	73	44	44
Winter wheat	2198	1064	90	45	37	92	79	73	98	57	51
Spring barley	3034	1663	73	39	39	97	94	91	75	41	43
Winter barley	420	165	91	51	46	98	93	89	93	55	51
Spring oats	303	95	58	38	34	93	91	89	63	42	39
Winter oats	184	63	69	51	47	96	93	93	71	55	51
Mixed corn	106	37	50	49	34	86	84	78	58	59	44
Rye	36	11	75	29	22	79	50	47	95	58	47
Maize	60	16	115	67	66	92	87	87	125	77	76
Early potatoes	75	19	159	170	193	99	99	100	160	171	193
Maincrop potatoes	368	125	176	185	246	100	100	100	177	185	246
Sugar beet	472	189	148	92	182	100	94	100	148	98	183
Swedes and Turnips (stock)	222	53	64	86	68	84	87	82	76	98	83
Mangolds	48	4	116	86	113	90	86	88	129	100	128
Kale and cow cabbage	289	66	105	52	51	95	82	79	110	63	64
Rape for stockfeed	84	33	112	79	52	96	94	90	116	84	58
Beans for stockfeed	154	46	9	23	20	16	35	32	57	65	62
Other stockfeed	91	26	67	54	53	79	78	78	85	69	69
Peas for human consumption	185	90	8	26	31	27	52	54	29	49	57
Broad beans	15	10	11	25	26	52	52	52	22	49	50
Runner and French beans	27	10	138	86	95	92	100	100	150	86	95
Brussels sprouts	53	17	228	124	197	99	99	99	231	125	198
Cabbages	48	19	153	97	151	100	90	89	154	108	169
Cauliflower	25	10	178	130	191	98	93	93	182	140	206
Carrots	33	9	85	69	125	76	76	76	111	90	164
Onions	25	6	126	127	195	93	98	98	135	129	199
Small fruit	30	6	70	37	77	67	60	85	104	61	91
Top fruit	88	46	104	22	49	82	49	64	128	45	78
Hops	26	9	158	75	176	97	84	95	163	89	186
Oil seed rape	29	13	187	65	62	100	100	95	187	65	64
All tillage	9170	4074	85	51	57	92	87	84	93	59	68
One year leys	77	29	92	35	24	80	49	48	114	71	51
Two to seven year leys	3754	1830	132	36	29	86	63	60	153	57	48
Permanent grass	4093	2991	67	22	15	61	42	39	108	52	39
All crops and grass	17094	8924	89	38	37	80	67	64	110	57	58

* 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)

		0	<25	25—	50—	75—	100—	125—	150—	200—	250—	300—	400+
Fields													
Spring wheat	187	5	2	14	24	39	14	1	0	0	0	0	0
Winter wheat	2198	8	6	2	11	25	30	12	4	1	0	0	0
Spring barley	3034	3	2	12	26	45	9	3	1	0	0	0	0
Winter barley	420	2	3	4	15	31	32	11	2	0	0	0	0
Spring oats	303	7	4	22	34	26	6	1	0	0	0	0	0
Winter oats	184	4	10	11	31	29	13	1	2	0	0	0	0
Mixed corn	106	14	12	33	14	19	1	6	1	0	0	0	0
Rye	36	21	3	1	13	34	8	19	0	0	2	0	0
Maize	60	8	0	0	5	14	23	32	16	3	0	0	0
Early potatoes	75	1	2	0	0	9	11	16	52	0	6	3	0
Maincrop potatoes	368	0	0	1	1	4	5	9	61	12	6	1	0
Sugar beet	472	0	0	1	1	5	11	32	43	7	0	0	0
Swedes and turnips (stock)	222	16	4	18	22	15	15	6	5	0	0	0	0
Mangolds	48	10	10	8	5	2	4	20	35	3	1	4	0
Kale and cow cabbage	289	5	1	8	14	22	14	17	14	3	1	4	0
Rape for stockfeed	84	4	1	9	21	15	9	10	16	14	0	0	1
Beans for stockfeed	154	84	5	3	1	3	2	0	1	0	0	0	0
Other stockfeed	91	21	3	9	19	23	7	14	2	2	0	0	0
Peas for human consumption	185	73	15	7	5	0	0	0	0	0	0	0	0
Broad beans	15	48	46	6	0	0	0	0	0	0	0	0	0
Runner and French beans	27	8	1	1	3	5	0	24	57	0	1	1	0
Brussels sprouts	53	1	0	0	0	10	0	7	30	2	11	39	0
Cabbages	48	0	0	0	5	13	9	5	58	8	0	2	0
Cauliflower	25	2	0	0	5	13	6	10	20	27	9	7	0
Carrots	33	24	0	4	0	31	18	4	19	0	0	0	0
Onions	25	7	0	2	4	35	11	6	12	23	1	0	0
Small fruit	30	33	9	9	0	3	3	32	8	1	1	0	0
Top fruit	88	18	2	1	4	11	17	29	9	9	0	0	0
Hops	26	3	0	0	0	1	16	25	20	34	1	0	0
Oil seed rape	29	0	0	0	0	2	5	12	49	24	8	0	0
All tillage	9170	8	3	8	17	30	15	8	7	2	0	0	0
One year leys	77	20	0	15	21	11	9	8	6	2	5	5	0
Two to seven year leys	3754	14	1	9	16	12	6	9	10	6	6	7	4
Permanent grass	4093	39	2	11	16	11	3	4	5	3	3	2	1
All crops and grass	17094	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	36	0	26	17	2	0	0	2	3	0	0	0
Maize	60	0	11	35	24	14	0	0	3	0	0	0
Early potatoes	13	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	6	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	14	7	8	22	9	8	19	2	0	2	0
Kale and cow cabbage	289	18	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	65	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	48	23	19	3	0	1	0	1	0	0	0
Broad beans	15	48	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	1	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	2	0	8	26	14	6	38	5	0	0	0
Small fruit	30	40	5	23	16	1	1	1	0	0	0	0
Top fruit	88	51	12	15	10	0	0	0	0	0	0	0
Hops	26	16	2	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 K_2O (kg/ha)

	0	<25	25—	50—	75—	100—	125—	150—	200—	250—	300—	400+
Fields	187	15	4	53	26	1	0	0	0	0	0	0
Spring wheat	2198	27	2	35	31	0	0	0	0	0	0	0
Winter wheat	3034	9	4	62	20	0	0	0	0	0	0	0
Spring barley	420	11	3	41	38	0	0	0	0	0	0	0
Winter barley	303	11	9	59	17	0	1	0	0	0	0	0
Spring oats	184	7	4	44	38	1	1	0	0	0	0	0
Winter oats	106	22	3	45	25	0	0	0	0	0	0	0
Mixed corn	36	53	0	29	12	5	0	0	0	0	0	0
Rye	60	13	0	11	35	10	4	4	0	0	0	0
Maize	75	0	0	2	0	6	11	15	25	29	2	0
Early potatoes	368	0	0	1	1	2	0	18	19	34	22	1
Maincrop potatoes	472	0	0	1	3	10	4	29	35	7	3	0
Sugar beet												
Swedes and turnips (stock)	222	18	3	21	18	11	3	8	3	0	0	0
Mangolds	48	12	4	9	8	8	2	18	20	1	2	0
Kale and cow cabbage	289	21	5	24	26	4	2	3	1	0	0	0
Rape for stockfeed	84	10	7	33	34	1	2	0	4	0	0	0
Beans for stockfeed	154	68	1	12	13	2	1	1	1	0	0	0
Other stockfeed	91	22	3	20	25	6	8	1	0	0	0	0
Peas for human consumption	185	46	3	12	29	4	0	1	0	0	0	0
Broad beans	15	48	0	4	48	0	0	0	0	0	0	0
Runner and French beans	27	0	0	0	23	3	6	4	7	1	0	0
Brussels sprouts	53	1	0	0	1	5	6	9	54	10	3	0
Cabbages	48	11	0	0	1	13	10	29	19	10	5	0
Cauliflower	25	7	0	0	1	0	2	29	12	20	17	0
Carrots	33	24	0	4	0	6	11	44	18	23	4	0
Onions	25	2	0	0	4	3	0	15	1	1	0	0
Small fruit	30	15	3	7	28	7	2	10	0	0	0	0
Top fruit	88	36	2	9	16	4	3	5	0	0	0	0
Hops	26	5	0	0	0	0	26	16	44	1	2	0
Oil seed rape	29	5	0	16	65	0	0	6	0	0	0	0
All tillage	9170	16	3	42	23	1	1	3	3	2	1	0
One year leys	77	52	7	23	7	8	1	0	0	0	0	0
Two to seven year leys	3754	40	7	32	12	2	2	1	0	0	0	0
Permanent grass	4093	61	8	22	5	1	0	0	0	0	0	0
All crops and grass	17094	36	6	33	14	1	1	2	2	1	0	0