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Assessment of Fertilizer Use by Crop at the Global Level

International Fertilizer Association (IFA) and
International Plant Nutrition Institute (IPNI)

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Introductory and Explanatory Notes

Fully understanding the contribution of the different crop types to fertilizer use at the national, regional and global levels is an essential component of fertilizer consumption analysis and a prerequisite to the development of sound fertilizer demand forecasts and scientific assessments and modelling. However, this information is rarely available, challenging to collect, and time-consuming to process. In order to fill the gap, the International Fertilizer Association (IFA) carries out regular surveys (every 3 to 4 years) on fertilizer use by crop in the main fertilizer-consuming countries. This survey benefited from the agronomic expertise of the International Plant Nutrition Institute (IPNI) to validate estimates.

The previous assessment was published in 2013 and referred to the 2010-2010/11 campaign. One country has been added to this update: New Zealand. Moreover, the crop breakdown has been fine-tuned, with the addition of the grassland category.

IFA's country estimates currently cover 28 countries (considering the European Union (EU-28) as a single country). These countries account together for 94% of world fertilizer consumption.

In this assessment, crops have been divided into 14 groups:

1. Wheat;
2. Rice;
3. Maize (for grain and silage);
4. Other Cereals: barley, sorghum, oats, rye, triticale, millet, etc.;
5. Soybean;
6. Oil Palm;
7. Other Oilseeds: rapeseed/canola, mustard, sunflower, groundnut, coconut, etc.;
8. Fibre Crops: cotton, flax, hemp, jute, etc.;
9. Sugar Crops: sugar cane and sugar beet;
10. Roots & Tubers: potato, cassava, sweet potato, yam, etc.;
11. Fruits;
12. Vegetables;
13. Grassland: temporary and permanent grassland and pastures for hay, silage and grazing;
14. Residual: pulses, nut trees, rubber, cocoa, coffee, tea, tobacco, etc., as well as forestry, fish ponds, ornamentals, turf, golf courses, homes, gardens, and other potential non-industrial/non-feed uses.

Total nutrient consumption figures used in this report are those published in September 2017 on IFADATA online for the 2014-2014/15 campaign. Country estimates of fertilizer use by crop have been adjusted accordingly. Please note that consumption time series for China have been revised since the previous assessment.

Detailed estimates of fertilizer use by crop in 2014-2014/15 in the 28 countries are given in Annexes 3 and 4 of the report. Estimates can also be downloaded in Excel format.

Data published in this report are estimates based on the best information available to IFA and IPNI. They provide an order of magnitude but are not hard data and, as such, should be used and interpreted with the necessary caution. Differences from the previous assessments can reflect changes in crop mix, weights of the different countries, fertilizer management practices, data quality, or a combination of these. This dataset is expected to improve over time with the progressive increase of the country and crop coverage. Understanding fertilizer applications to coffee, tea and cocoa will be a priority for the next update, with an extended coverage in Latin America and Africa.

Breakdown of Total Fertilizer Use by Crop Category

Total world fertilizer consumption reached 181.9 million metric tonnes (Mt) of nutrients in 2014-2014/15¹, of which 102.5 Mt N, 45.9 Mt P₂O₅ and 33.5 Mt K₂O.

Out of this total, 89.6 Mt are estimated to have been applied to cereals, i.e. slightly less than half (49.3%) of world fertilizer use. Of the top-three cereals, maize was the greatest contributor to world fertilizer consumption (16.2%), followed by wheat (15.3%) and rice (13.7%). Fertilizer use on the other cereals represented 4.0% of the world total.

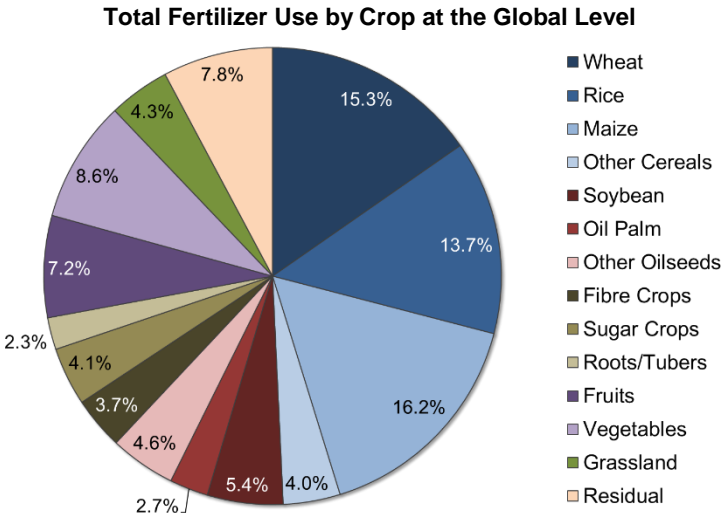
Global applications to oil crops are estimated at 23.2 Mt, or 12.7% of world consumption, with market shares of 5.4% for soybean, 2.7% for oil palm and 4.6% for the other oilseeds.

Fibre and sugar crops each accounted for around 4% of world applications (3.7% and 4.1%, respectively), and roots & tubers for 2.3%.

Fruits and vegetables together represented 15.8% of the world market, with fruits consuming 7.2% of the total, and vegetables 8.6%.

Applications to grassland are estimated to account for 4.3% of the world total, but this share is likely underestimated due to information gaps for some countries.

The 'residual' category, which includes a wide range of plant species (including non-agricultural species), received the remaining 7.8% of global fertilizer use.



Comparison of Total Fertilizer Use by Crop Category between Countries

At the national level, there is a huge diversity in the contributions from the different crop categories to total domestic fertilizer consumption. This is mostly due to differences in the crop mix and intensification level of the different cropping systems.

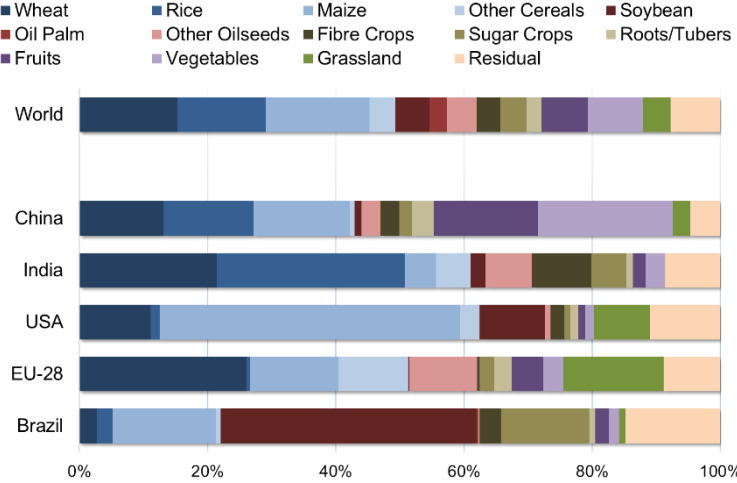
The largest contributors of national fertilizer consumption in the five leading markets are fruits and vegetables in China (37%), rice in India (29%), maize in the United States (47%), wheat

¹ In 2014 for countries with fertilizer statistics expressed in calendar years (e.g. China, Brazil, Indonesia) and in 2014/15 for countries with statistics expressed in fertilizer years (e.g. India, United States, European Union).

and grassland in the European Union (26% and 16%, respectively) and soybean and sugarcane in Brazil (40% and 14%, respectively).

Extreme examples of fertilizer use are found in Bangladesh, where rice accounts for 69% of total fertilizer consumption; Malaysia, where oil palm plantations consume 83% of the fertilizer used domestically; and New Zealand, where the bulk of fertilizer is applied to grassland (89%).

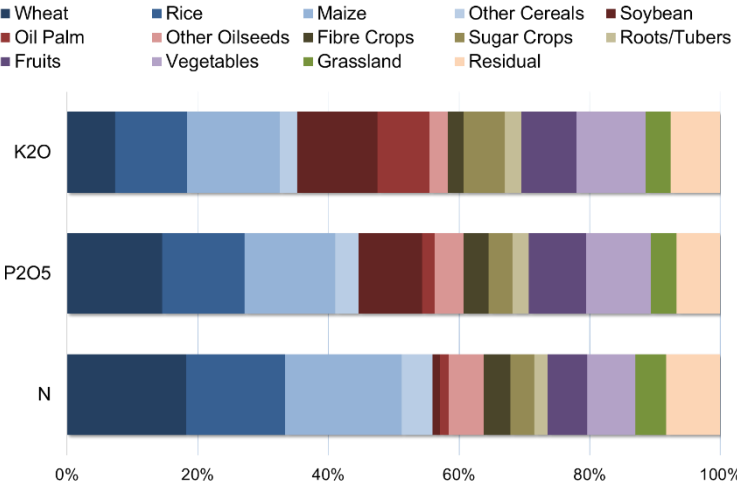
Relative Contribution of the Different Crop Categories to Total Fertilizer Consumption in the World and the Top-5 Markets



Breakdown of Total Fertilizer Use by Nutrient and by Crop Category

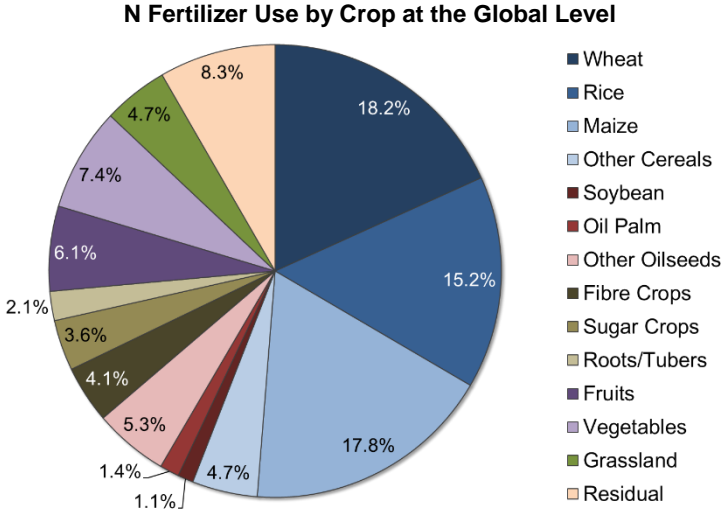
Because different crops have different nutrient requirements, their contribution to N, P and K consumption varies significantly. Cereals have a much larger impact on N fertilizer consumption, while soybean (a leguminous crop that can biologically fix atmospheric N) only boost P and K consumption, and crops with massive biomass such as oil palm and sugarcane stimulate K use. Fruits and vegetables also contribute significantly to P and K consumption.

Fertilizer Use by Crop: Breakdown by Nutrient by Crop

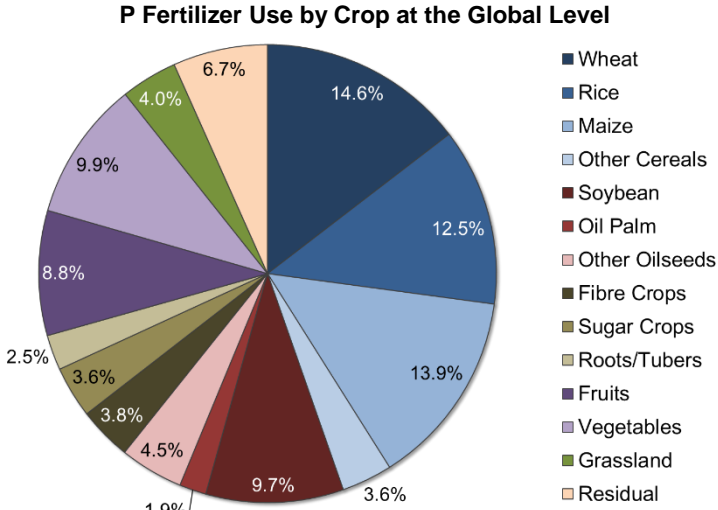


It is estimated that 57.3 Mt N were applied to cereals in 2014-2014/15, representing 55.9% of world fertilizer N consumption. Wheat was the main crop receiving N fertilizers, with 18.2% of global use, followed by maize with 17.8% and rice with 15.2%. Other cereals accounted for 4.7% of the world total. Because of soybean, which fixes N from the atmosphere, oil crops contributed modestly (7.8%) to world N fertilizer consumption. Rapeseed (under the 'other

oilseeds' category) was the main oilseed crop receiving N fertilizers. Cotton, sugar crops, and roots & tubers represented 4.1%, 3.6% and 2.1% of global fertilizer N use, respectively. Fruits and vegetables accounted for 13.5% of the total, of which 6.1% was applied to fruits and 7.4% to vegetables. Grassland received 4.7% of world N fertilizer use, and the remaining 8.3% was applied to other agricultural and non-agricultural plant species (residual).

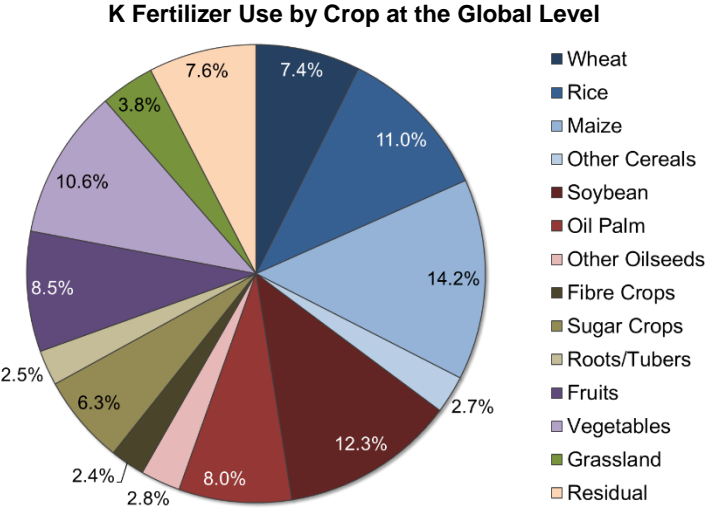


As far as P is concerned, it is estimated that cereals received 20.5 Mt P₂O₅ in 2014-2014/15, i.e. 44.6% of world P fertilizer applications, with a higher contribution of wheat (14.6%) compared to maize (13.9%), rice (12.5%) and other cereals (3.6%). Oilseed crops accounted for 16.1% of total consumption (7.4 Mt P₂O₅), with oil palm representing 1.9%, soybean 9.7% and the other annual oilseeds 4.5%. Fibre crops, sugar crops, and roots & tubers contributed to 3.8%, 3.6% and 2.5% of global P fertilizer consumption, respectively. The market share of fruits and vegetables is estimated at 18.7%, with 8.8% going to fruits and 9.9% to vegetables. Grassland received 4.0% of total P fertilizer applications, and the residual plant species account for the use of the remaining 6.7%.

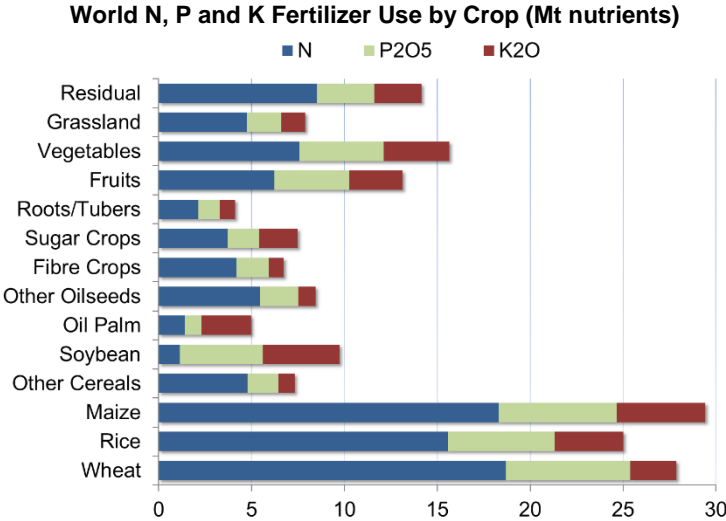


The contribution of the different crop categories to world K fertilizer consumption is quite different. High K-consuming crops (oil palm and sugar crops in particular) have a strong impact on K fertilizer use. In 2014-2014/15, cereals received 11.8 Mt K₂O, i.e. 35.2% of world K consumption, with a low contribution of wheat (7.4%) compared to rice (11.0%) and maize (14.2%). Other cereals received only 2.7% of the total K use. Oilseeds represented 23.1% of

the total (7.7 Mt K₂O), with the bulk being applied to soybean (12.3%) and oil palm (8.0%), other oilseeds accounting for only 2.8%. K fertilizer use on fibre crops and roots & tubers was modest (2.4% and 2.5% of total K use, respectively) compared to sugar crops (6.3%). Fruits and vegetables are large K fertilizer consumers, with a 19.1% share of the world total, of which 8.5% went to fruits and 10.6% to vegetables. Grassland used 3.8% of total K applications, and the remaining 7.6% was applied to other plant species (residual).

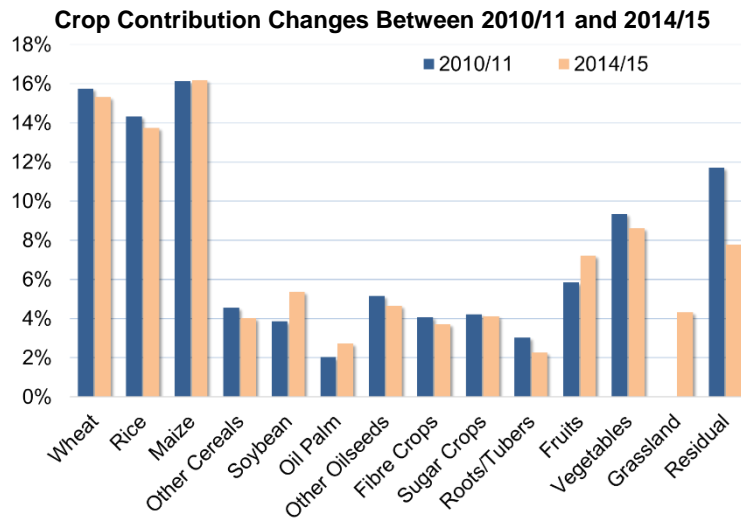


The contribution of the 14 crop categories to global N, P and K fertilizer consumption is summarized in the figure below.



Comparison with the Previous Assessment

Compared to the previous assessment (relative to the 2010-2010/11 campaign), fertilizer applications to soybean and oil palm increased sharply, reflecting rising area planted to those crops. In contrast, applications to minor cereal and oilseed crops, as well as to roots & tubers declined. Fertilizer use on maize, wheat and rice is influenced by continuous gains in N use efficiency. The variation for fruits and vegetables is due to reallocation of fertilizer use between the two sub-groupings. Applications to the 'residual' category have contracted as applications to grassland have been individualized since the previous survey.



Estimates of Total Fertilizer Use by Crop Category at the Global Level

Crop Category	2010-2010/11		Δ	2014-2014/15	
	Quantity (Mt nutrients)			Share (%)	
Wheat	27.1	27.9	+0.7	15.8	15.3
Rice	24.7	25.0	+0.3	14.3	13.7
Maize	27.8	29.4	+1.6	16.1	16.2
Other Cereals	7.8	7.3	-0.5	4.6	4.0
<i>Cereals</i>	87.5	89.6	+2.2	50.8	49.3
Soybean	6.6	9.7	+3.1	3.9	5.4
Oil Palm	3.5	5.0	+1.5	2.0	2.7
Other Oilseeds	8.9	8.5	-0.4	5.2	4.6
<i>Oilseeds</i>	19.0	23.2	+4.1	11.0	12.7
Fibre Crops	7.0	6.7	-0.2	4.1	3.7
Sugar Crops	7.2	7.5	+0.3	4.2	4.1
Roots & Tubers	5.2	4.1	-1.1	3.0	2.3
Fruits	10.1	13.1	+3.1	5.8	7.2
Vegetables	16.1	15.7	-0.4	9.3	8.6
<i>Fruits & Vegetables</i>	26.2	28.8	+2.6	15.2	15.8
Grassland*	---	7.9	---	---	4.3
Residual	20.1	14.2	-6.0	11.7	7.8
Total	172.2	181.9	+9.7	100.0	100.0

(*) Estimates for grassland were not available in 2010-2010/11.

Estimates of Fertilizer Use by Nutrient and by Crop Category at the Global Level

Crop Category	2010-2010/11	2014-2014/15	2010-2010/11	2014-2014/15	
	Quantity (Mt nutrients)		Share (%)		
N	Wheat	18.9	18.7	18.1	18.2
	Rice	16.0	15.6	15.4	15.2
	Maize	17.6	18.3	16.8	17.8
	Other Cereals	5.0	4.8	4.8	4.7
	<i>Cereals</i>	57.5	57.3	55.2	55.9
	Soybean	1.0	1.1	0.9	1.1
	Oil Palm	1.1	1.4	1.1	1.4
	Other Oilseeds	5.6	5.5	5.3	5.3
	<i>Oilseeds</i>	7.6	8.0	7.3	7.8
	Fibre Crops	4.5	4.2	4.3	4.1
	Sugar Crops	3.7	3.7	3.5	3.6
	Roots & Tubers	2.9	2.1	2.8	2.1
	Fruits	6.1	6.2	5.8	6.1
	Vegetables	9.5	7.6	9.1	7.4
	<i>Fruits & Vegetables</i>	15.6	13.8	15.0	13.5
	Grassland	---	4.8	---	4.7
	Residual	12.5	8.5	12.0	8.3
	Total	104.3	102.5	100.0	100.0
	P₂O₅	Wheat	6.5	6.7	16.1
Rice		5.2	5.8	12.8	12.5
Maize		6.4	6.4	15.2	13.9
Other Cereals		1.6	1.6	4.4	3.6
<i>Cereals</i>		19.7	20.5	48.5	44.6
Soybean		3.2	4.5	7.9	9.7
Oil Palm		0.4	0.9	1.0	1.9
Other Oilseeds		2.3	2.1	5.8	4.5
<i>Oilseeds</i>		6.0	7.4	14.7	16.1
Fibre Crops		1.7	1.7	4.3	3.8
Sugar Crops		1.4	1.7	3.6	3.6
Roots & Tubers		1.3	1.1	3.2	2.5
Fruits		2.2	4.1	5.3	8.8
Vegetables		3.8	4.5	9.4	9.9
<i>Fruits & Vegetables</i>		6.0	8.6	14.8	18.7
Grassland		---	1.8	---	4.0
Residual		4.5	3.1	11.0	6.7
Total		40.5	45.9	100.0	100.0
K₂O		Wheat	1.7	2.5	6.2
	Rice	3.5	3.7	12.6	11.0
	Maize	4.1	4.8	14.9	14.2
	Other Cereals	1.0	0.9	3.7	2.7
	<i>Cereals</i>	10.3	11.8	37.4	35.2
	Soybean	2.5	4.1	9.0	12.3
	Oil Palm	2.0	2.7	7.2	8.0
	Other Oilseeds	1.0	0.9	3.5	2.8
	<i>Oilseeds</i>	5.4	7.7	19.8	23.1
	Fibre Crops	0.8	0.8	2.8	2.4
	Sugar Crops	2.1	2.1	7.7	6.3
	Roots & Tubers	1.0	0.8	3.8	2.5
	Fruits	1.8	2.8	6.6	8.5
	Vegetables	2.8	3.6	10.0	10.6
	<i>Fruits & Vegetables</i>	4.6	6.4	16.6	19.1
	Grassland	---	1.3	---	3.8
	Residual	3.2	2.5	11.8	7.6
	Total	27.4	33.5	100.0	100.0

Estimates of Fertilizer Use by Crop Category in Selected Countries ('000 tonnes nutrients)

		CEREALS					OILSEEDS			FRUITS/VEG						
		Wheat	Rice	Maize	Oth Ce	Soy	Palm	Oth OS	Fibre	Sugar	R&T	Fruits	Veg	Grass	Residual	
		% of World	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	
China	N	24.5%	3 396	3 899	4 654	201	201	5	755	729	478	956	3 396	4 654	503	1 328
	P2O5	33.2%	2 013	1 769	1 815	122	229	3	564	534	336	519	2 898	3 127	610	714
	K2O	24.4%	965	1 153	826	41	74	8	106	196	139	172	1 635	2 371	245	246
	N+P+K	26.7%	6 374	6 821	7 295	364	504	16	1 425	1 460	953	1 646	7 929	10 152	1 359	2 288
India	N	16.5%	3 949	4 932	831	915	271	0	1 271	1 644	847	136	254	424	0	1 475
	P2O5	13.3%	1 275	1 683	293	348	268	0	421	488	354	67	134	220	0	549
	K2O	7.6%	261	884	127	127	43	0	157	228	215	58	114	144	0	175
	N+P+K	14.1%	5 485	7 500	1 250	1 390	583	0	1 849	2 360	1 417	261	502	788	0	2 198
USA	N	11.5%	1 561	201	5 577	445	178	0	139	240	96	113	97	132	1 337	1 708
	P2O5	9.2%	563	48	2 044	142	746	0	27	89	58	69	27	71	168	172
	K2O	13.7%	170	44	2 050	45	1 182	0	5	121	34	74	107	62	311	392
	N+P+K	11.3%	2 294	294	9 671	632	2 107	0	171	450	188	256	230	265	1 815	2 272
EU-28	N	11.0%	3 281	45	1 506	1 284	1	0	1 205	34	169	191	472	258	1 944	848
	P2O5	5.6%	581	15	401	258	10	0	261	15	75	98	182	121	259	292
	K2O	8.7%	494	29	404	278	15	0	314	20	126	181	161	149	415	338
	N+P+K	9.2%	4 356	90	2 310	1 819	26	0	1 780	70	369	470	815	528	2 619	1 479
Brazil	N	3.8%	179	182	1 059	50	266	12	8	164	802	38	119	60	79	854
	P2O5	10.3%	121	84	572	34	2 693	4	13	173	297	51	58	86	41	524
	K2O	16.1%	82	73	623	32	2 633	17	8	136	834	41	120	75	22	698
	N+P+K	7.7%	383	340	2 254	116	5 592	34	29	473	1 932	131	297	221	142	2 077
Indonesia	N	2.9%	0	1 192	447	0	15	745	15	3	60	89	104	149	0	161
	P2O5	2.9%	0	399	133	0	20	506	20	3	20	33	47	67	0	84
	K2O	5.3%	0	177	71	0	9	1 240	9	1	44	27	62	71	0	61
	N+P+K	3.3%	0	1 769	651	0	44	2 491	44	7	124	149	213	286	0	306
Pakistan	N	3.2%	1 359	497	149	17	0	0	33	597	199	33	133	66	0	232
	P2O5	2.1%	449	117	39	5	0	0	10	176	44	10	39	20	0	68
	K2O	0.1%	12	5	1	0	0	0	0	3	2	2	5	1	0	3
	N+P+K	2.4%	1 819	619	189	22	0	0	43	776	245	45	177	87	0	302

Note: 'Residual' includes pulses, nut trees, rubber, cocoa, coffee, tea, tobacco, etc., as well as forestry, fish ponds, ornamentals, turf, golf courses, homes, gardens, and other potential non-industrial/non-feed uses

		CEREALS				OILSEEDS			FRUITS/VEG							
		Wheat	Rice	Maize	Oth Ce	Soy	Palm	Oth OS	Fibre	Sugar	R&T	Fruits	Veg	Grass	Residual	
% of World		Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	
Canada	N	2.5%	773	0	201	330	15	0	980	0	1	25	20	12	61	156
	P2O5	2.1%	242	0	59	104	86	0	312	0	0	7	6	4	0	129
	K2O	1.2%	100	0	90	39	30	0	57	0	0	7	6	4	0	66
	N+P+K	2.2%	1 115	0	351	473	131	0	1 349	0	2	39	32	20	61	351
Vietnam	N	1.3%	0	812	162	0	5	0	20	2	54	27	57	97	0	117
	P2O5	1.5%	0	448	53	0	5	0	21	0	19	7	31	45	0	71
	K2O	1.8%	0	348	36	0	5	0	18	0	36	9	30	48	0	70
	N+P+K	1.5%	0	1 608	251	0	14	0	59	3	109	43	117	190	0	258
Australia	N	1.4%	553	8	15	200	0	0	124	80	60	20	32	24	100	190
	P2O5	2.0%	286	2	5	126	0	0	51	21	18	9	19	14	320	48
	K2O	0.7%	35	0	0	11	0	0	12	10	35	11	22	13	76	9
	N+P+K	1.4%	874	10	20	337	0	0	187	111	113	40	73	51	496	247
Thailand	N	1.4%	0	986	85	4	0	35	4	3	85	28	38	70	0	70
	P2O5	1.1%	0	243	35	1	1	35	2	1	50	24	44	35	0	25
	K2O	1.9%	0	252	32	2	0	84	3	1	90	45	65	39	0	32
	N+P+K	1.4%	0	1 481	152	8	1	154	10	5	225	98	147	144	0	128
Russia	N	1.4%	609	15	163	215	30	0	104	0	82	15	1	6	97	148
	P2O5	1.3%	215	6	62	80	17	0	68	1	71	17	1	6	11	62
	K2O	1.1%	74	2	39	51	10	0	25	0	76	23	1	7	10	35
	N+P+K	1.3%	899	23	264	347	56	0	196	1	229	54	4	19	118	245
Bangladesh	N	1.3%	20	1 025	32	0	10	0	10	27	12	50	40	45	0	50
	P2O5	1.3%	10	350	32	0	10	0	15	15	10	49	36	55	0	25
	K2O	1.3%	6	244	17	0	10	0	23	11	11	35	22	39	0	17
	N+P+K	1.3%	36	1 620	81	0	30	0	48	53	33	133	98	139	0	92
Malaysia	N	0.6%	0	83	1	0	0	470	0	0	1	1	19	15	0	39
	P2O5	0.8%	0	41	1	0	0	248	0	0	1	0	21	14	0	22
	K2O	3.7%	0	62	1	0	0	1 117	0	0	1	1	6	5	0	45
	N+P+K	1.2%	0	186	2	0	0	1 835	0	0	3	2	46	34	0	107
Turkey	N	1.5%	627	15	119	164	2	0	82	49	31	22	149	119	0	112
	P2O5	1.2%	245	5	40	68	2	0	31	15	17	10	46	37	0	54
	K2O	0.3%	6	2	9	4	1	0	7	3	15	9	29	23	0	10
	N+P+K	1.2%	878	21	168	236	5	0	120	67	63	41	224	180	0	175

		CEREALS				OILSEEDS			FRUITS/VEG							
		Wheat	Rice	Maize	Oth Ce	Soy	Palm	Oth OS	Fibre	Sugar	R&T	Fruits	Veg	Grass	Residual	
% of World		Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	
Mexico	N	1.5%	82	7	890	50	0	7	9	12	98	9	149	85	0	107
	P2O5	0.8%	11	3	139	6	6	5	2	6	34	4	75	44	0	33
	K2O	0.6%	3	2	19	0	2	3	0	3	62	4	65	36	0	16
	N+P+K	1.1%	95	12	1 049	57	8	15	11	21	194	17	289	166	0	156
Ukraine	N	1.2%	319	1	331	142	35	0	213	0	35	35	6	14	24	26
	P2O5	0.5%	41	0	47	21	13	0	53	0	13	6	2	4	4	8
	K2O	0.7%	41	0	47	20	14	0	52	0	20	11	2	5	5	9
	N+P+K	0.9%	400	2	425	183	62	0	318	0	69	53	10	23	32	43
Argentina	N	0.8%	220	3	211	83	67	0	17	3	25	10	35	10	50	95
	P2O5	1.3%	129	2	119	61	202	0	13	0	1	7	9	7	20	20
	K2O	0.2%	0	4	1	0	7	0	1	0	1	6	18	12	0	19
	N+P+K	0.8%	350	9	332	144	276	0	32	3	27	23	62	29	70	134
Egypt	N	1.1%	238	153	266	17	1	0	25	34	79	34	90	146	0	41
	P2O5	0.4%	26	10	25	8	0	0	6	7	20	15	20	33	0	10
	K2O	0.2%	12	0	8	3	0	0	1	2	7	5	9	13	0	3
	N+P+K	0.8%	276	163	299	28	1	0	32	43	106	54	119	192	0	54
Belarus	N	0.5%	81	0	115	147	0	0	56	1	17	4	0	1	43	50
	P2O5	0.3%	27	0	32	53	0	0	15	3	8	3	0	0	1	9
	K2O	1.8%	87	0	122	192	0	0	54	5	22	7	0	1	46	72
	N+P+K	0.7%	196	0	269	393	0	0	125	9	46	14	1	3	89	131
Iran	N	0.9%	309	58	44	62	1	0	24	11	29	37	149	102	52	52
	P2O5	0.3%	56	9	8	9	2	0	8	3	6	8	20	12	6	6
	K2O	0.2%	10	2	2	2	1	0	6	1	5	5	19	12	2	2
	N+P+K	0.6%	374	68	54	73	3	0	38	15	39	49	187	126	60	60
Japan	N	0.4%	37	115	0	2	5	0	0	0	15	21	45	76	19	61
	P2O5	0.8%	35	115	0	4	11	0	0	0	14	29	23	69	17	42
	K2O	0.8%	22	88	0	3	9	0	0	0	8	19	25	58	15	37
	N+P+K	0.6%	94	318	0	10	25	0	0	0	36	69	93	203	50	139
Philippines	N	0.6%	0	337	133	0	0	3	13	0	44	4	57	6	0	37
	P2O5	0.3%	0	71	20	0	0	2	0	0	13	3	15	3	0	6
	K2O	0.5%	0	49	11	0	0	5	24	0	21	2	41	3	0	6
	N+P+K	0.5%	0	457	165	0	0	10	37	0	79	9	112	12	0	49

		CEREALS				OILSEEDS			FRUITS/VEG							
		Wheat	Rice	Maize	Oth Ce	Soy	Palm	Oth OS	Fibre	Sugar	R&T	Fruits	Veg	Grass	Residual	
% of World		Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	Qty (kt)	
New-Zealand	N	0.4%	9	0	4	9	0	0	0	1	0	2	11	9	384	0
	P2O5	0.8%	7	0	4	7	0	0	0	1	0	1	9	7	319	1
	K2O	0.4%	3	0	1	3	0	0	0	0	0	2	7	5	111	0
	N+P+K	0.5%	18	0	9	18	0	0	1	2	0	5	26	21	814	2
South Africa	N	0.4%	21	0	268	8	5	0	12	1	32	13	27	19	24	9
	P2O5	0.4%	9	0	94	4	8	0	13	0	18	9	9	10	13	6
	K2O	0.4%	2	0	19	1	5	0	4	0	47	8	23	12	5	4
	N+P+K	0.4%	31	0	381	12	18	0	28	1	96	29	59	41	42	19
Uzbekistan	N	0.6%	188	7	6	10	0	0	6	239	0	7	34	34	11	26
	P2O5	0.3%	38	2	1	2	0	0	1	48	0	3	7	8	2	6
	K2O	0.1%	4	3	1	0	0	0	0	14	0	1	1	2	0	1
	N+P+K	0.4%	230	11	8	13	0	0	8	301	0	11	42	44	14	32
Morocco	N	0.2%	88	0	10	35	0	0	7	0	9	6	35	24	0	12
	P2O5	0.5%	82	0	8	27	0	0	9	0	8	7	35	26	0	16
	K2O	0.1%	5	0	0	1	0	0	1	0	1	1	13	6	0	1
	N+P+K	0.3%	175	1	18	63	0	0	16	0	18	14	82	55	0	29
Chile	N	0.2%	37	2	25	13	0	0	2	0	3	6	33	7	39	29
	P2O5	0.3%	23	2	9	9	0	0	1	0	2	9	10	4	42	19
	K2O	0.3%	6	2	8	2	0	0	1	0	5	9	36	8	15	7
	N+P+K	0.2%	66	6	42	24	0	0	4	1	9	24	79	18	96	55
ROW	N	6.4%	763	985	978	378	39	143	320	326	352	209	619	906	0	502
	P2O5	5.1%	215	336	303	147	140	71	125	130	168	69	227	383	0	52
	K2O	5.8%	70	254	190	39	74	192	53	59	254	61	203	332	0	174
	N+P+K	6.0%	1 048	1 574	1 470	564	253	406	498	515	774	338	1 050	1 622	0	728
World	N	100.0%	18 699	15 561	18 283	4 783	1 147	1 422	5 453	4 200	3 714	2 140	6 221	7 572	4 766	8 536
	P2O5	100.0%	6 699	5 762	6 391	1 647	4 469	873	2 062	1 729	1 672	1 142	4 050	4 530	1 835	3 073
	K2O	100.0%	2 467	3 679	4 755	897	4 123	2 666	942	817	2 112	835	2 847	3 556	1 277	2 547
	N+P+K	100.0%	27 866	25 001	29 429	7 327	9 739	4 960	8 457	6 746	7 497	4 118	13 118	15 658	7 878	14 157

'Oth Ce' = other cereals

'Soy' = soybean

'Palm' = oil palm

'Oth OS' = other oilseeds

'R&T' = roots & tubers

'Veg' = vegetables

'Grass' = grassland

'Oth Cr' = other crops

'ROW' = rest of the world

Estimates of Fertilizer Use by Crop Category in Selected Countries (% of Total Domestic Consumption)

		Total (kt)	CEREALS				OILSEEDS			FRUITS/VEG						
			Wheat	Rice	Maize	Oth Ce	Soy	Palm	Oth OS	Fibre	Sugar	R&T	Fruits	Veg	Grass	Residual
			%	%	%	%	%	%	%	%	%	%	%	%	%	
China	N	25 154	13.5%	15.5%	18.5%	0.8%	0.8%	0.0%	3.0%	2.9%	1.9%	3.8%	13.5%	18.5%	2.0%	5.3%
	P2O5	15 254	13.2%	11.6%	11.9%	0.8%	1.5%	0.0%	3.7%	3.5%	2.2%	3.4%	19.0%	20.5%	4.0%	4.7%
	K2O	8 176	11.8%	14.1%	10.1%	0.5%	0.9%	0.1%	1.3%	2.4%	1.7%	2.1%	20.0%	29.0%	3.0%	3.0%
	N+P+K	48 584	13.1%	14.0%	15.0%	0.7%	1.0%	0.0%	2.9%	3.0%	2.0%	3.4%	16.3%	20.9%	2.8%	4.7%
India	N	16 950	23.3%	29.1%	4.9%	5.4%	1.6%	0.0%	7.5%	9.7%	5.0%	0.8%	1.5%	2.5%	0.0%	8.7%
	P2O5	6 099	20.9%	27.6%	4.8%	5.7%	4.4%	0.0%	6.9%	8.0%	5.8%	1.1%	2.2%	3.6%	0.0%	9.0%
	K2O	2 533	10.3%	34.9%	5.0%	5.0%	1.7%	0.0%	6.2%	9.0%	8.5%	2.3%	4.5%	5.7%	0.0%	6.9%
	N+P+K	25 581	21.4%	29.3%	4.9%	5.4%	2.3%	0.0%	7.2%	9.2%	5.5%	1.0%	2.0%	3.1%	0.0%	8.6%
USA	N	11 824	13.2%	1.7%	47.2%	3.8%	1.5%	0.0%	1.2%	2.0%	0.8%	1.0%	0.8%	1.1%	11.3%	14.4%
	P2O5	4 225	13.3%	1.1%	48.4%	3.4%	17.6%	0.0%	0.6%	2.1%	1.4%	1.6%	0.6%	1.7%	4.0%	4.1%
	K2O	4 597	3.7%	1.0%	44.6%	1.0%	25.7%	0.0%	0.1%	2.6%	0.7%	1.6%	2.3%	1.3%	6.8%	8.5%
	N+P+K	20 646	11.1%	1.4%	46.8%	3.1%	10.2%	0.0%	0.8%	2.2%	0.9%	1.2%	1.1%	1.3%	8.8%	11.0%
EU-28	N	11 238	29.2%	0.4%	13.4%	11.4%	0.0%	0.0%	10.7%	0.3%	1.5%	1.7%	4.2%	2.3%	17.3%	7.5%
	P2O5	2 569	22.6%	0.6%	15.6%	10.1%	0.4%	0.0%	10.2%	0.6%	2.9%	3.8%	7.1%	4.7%	10.1%	11.4%
	K2O	2 924	16.9%	1.0%	13.8%	9.5%	0.5%	0.0%	10.8%	0.7%	4.3%	6.2%	5.5%	5.1%	14.2%	11.6%
	N+P+K	16 731	26.0%	0.5%	13.8%	10.9%	0.2%	0.0%	10.6%	0.4%	2.2%	2.8%	4.9%	3.2%	15.7%	8.8%
Brazil	N	3 872	4.6%	4.7%	27.4%	1.3%	6.9%	0.3%	0.2%	4.2%	20.7%	1.0%	3.1%	1.6%	2.0%	22.1%
	P2O5	4 752	2.5%	1.8%	12.0%	0.7%	56.7%	0.1%	0.3%	3.6%	6.2%	1.1%	1.2%	1.8%	0.9%	11.0%
	K2O	5 395	1.5%	1.4%	11.5%	0.6%	48.8%	0.3%	0.1%	2.5%	15.5%	0.8%	2.2%	1.4%	0.4%	12.9%
	N+P+K	14 019	2.7%	2.4%	16.1%	0.8%	39.9%	0.2%	0.2%	3.4%	13.8%	0.9%	2.1%	1.6%	1.0%	14.8%
Indonesia	N	2 981	0.0%	40.0%	15.0%	0.0%	0.5%	25.0%	0.5%	0.1%	2.0%	3.0%	3.5%	5.0%	0.0%	5.4%
	P2O5	1 331	0.0%	30.0%	10.0%	0.0%	1.5%	38.0%	1.5%	0.2%	1.5%	2.5%	3.5%	5.0%	0.0%	6.3%
	K2O	1 772	0.0%	10.0%	4.0%	0.0%	0.5%	70.0%	0.5%	0.1%	2.5%	1.5%	3.5%	4.0%	0.0%	3.5%
	N+P+K	6 083	0.0%	29.1%	10.7%	0.0%	0.7%	40.9%	0.7%	0.1%	2.0%	2.5%	3.5%	4.7%	0.0%	5.0%
Pakistan	N	3 315	41.0%	15.0%	4.5%	0.5%	0.0%	0.0%	1.0%	18.0%	6.0%	1.0%	4.0%	2.0%	0.0%	7.0%
	P2O5	975	46.0%	12.0%	4.0%	0.5%	0.0%	0.0%	1.0%	18.0%	4.5%	1.0%	4.0%	2.0%	0.0%	7.0%
	K2O	33	35.0%	15.0%	3.0%	0.0%	0.0%	0.0%	0.0%	10.0%	6.0%	5.0%	15.0%	3.0%	0.0%	8.0%
	N+P+K	4 323	42.1%	14.3%	4.4%	0.5%	0.0%	0.0%	1.0%	17.9%	5.7%	1.0%	4.1%	2.0%	0.0%	7.0%

Note: 'Residual' includes pulses, nut trees, rubber, cocoa, coffee, tea, tobacco, etc., as well as forestry, fish ponds, ornamentals, turf, golf courses, homes, gardens, and other potential non-industrial/non-feed uses

		CEREALS				OILSEEDS			FRUITS/VEG							
		Wheat	Rice	Maize	Oth Ce	Soy	Palm	Oth OS	Fibre	Sugar	R&T	Fruits	Veg	Grass	Residual	
		Total (kt)	%	%	%	%	%	%	%	%	%	%	%	%	%	
Canada	N	2 575	30.0%	0.0%	7.8%	12.8%	0.6%	0.0%	38.1%	0.0%	0.0%	1.0%	0.8%	0.5%	2.4%	6.1%
	P2O5	949	25.5%	0.0%	6.3%	11.0%	9.1%	0.0%	32.8%	0.0%	0.0%	0.8%	0.6%	0.4%	0.0%	13.5%
	K2O	400	25.0%	0.0%	22.6%	9.8%	7.5%	0.0%	14.3%	0.0%	0.1%	1.8%	1.5%	0.9%	0.0%	16.6%
	N+P+K	3 924	28.4%	0.0%	8.9%	12.1%	3.3%	0.0%	34.4%	0.0%	0.0%	1.0%	0.8%	0.5%	1.6%	9.0%
Vietnam	N	1 354	0.0%	60.0%	12.0%	0.0%	0.4%	0.0%	1.5%	0.1%	4.0%	2.0%	4.2%	7.2%	0.0%	8.6%
	P2O5	700	0.0%	64.0%	7.5%	0.0%	0.8%	0.0%	3.0%	0.1%	2.8%	1.0%	4.4%	6.4%	0.0%	10.1%
	K2O	600	0.0%	58.0%	6.0%	0.0%	0.8%	0.0%	3.0%	0.1%	6.0%	1.5%	5.0%	8.0%	0.0%	11.7%
	N+P+K	2 654	0.0%	60.6%	9.5%	0.0%	0.5%	0.0%	2.2%	0.1%	4.1%	1.6%	4.4%	7.2%	0.0%	9.7%
Australia	N	1 407	39.3%	0.6%	1.1%	14.2%	0.0%	0.0%	8.8%	5.7%	4.3%	1.4%	2.3%	1.7%	7.1%	13.5%
	P2O5	919	31.1%	0.2%	0.5%	13.7%	0.0%	0.0%	5.5%	2.2%	2.0%	1.0%	2.1%	1.5%	34.9%	5.2%
	K2O	233	14.9%	0.0%	0.0%	4.7%	0.0%	0.0%	5.3%	4.4%	15.0%	4.7%	9.3%	5.5%	32.6%	3.7%
	N+P+K	2 559	34.2%	0.4%	0.8%	13.2%	0.0%	0.0%	7.3%	4.3%	4.4%	1.6%	2.9%	2.0%	19.4%	9.6%
Thailand	N	1 409	0.0%	70.0%	6.0%	0.3%	0.0%	2.5%	0.3%	0.2%	6.0%	2.0%	2.7%	5.0%	0.0%	5.0%
	P2O5	498	0.0%	48.9%	7.0%	0.3%	0.3%	7.0%	0.5%	0.2%	10.0%	4.9%	8.9%	7.0%	0.0%	5.0%
	K2O	645	0.0%	39.0%	5.0%	0.3%	0.0%	13.0%	0.5%	0.2%	14.0%	7.0%	10.0%	6.0%	0.0%	5.0%
	N+P+K	2 552	0.0%	58.0%	5.9%	0.3%	0.1%	6.0%	0.4%	0.2%	8.8%	3.8%	5.8%	5.6%	0.0%	5.0%
Russia	N	1 485	41.0%	1.0%	11.0%	14.5%	2.0%	0.0%	7.0%	0.0%	5.5%	1.0%	0.1%	0.4%	6.5%	10.0%
	P2O5	616	35.0%	1.0%	10.0%	13.0%	2.7%	0.0%	11.0%	0.1%	11.5%	2.7%	0.2%	1.0%	1.8%	10.0%
	K2O	354	21.0%	0.5%	11.0%	14.5%	2.8%	0.0%	7.0%	0.1%	21.5%	6.5%	0.3%	2.0%	2.8%	10.0%
	N+P+K	2 455	36.6%	0.9%	10.7%	14.1%	2.3%	0.0%	8.0%	0.1%	9.3%	2.2%	0.2%	0.8%	4.8%	10.0%
Bangladesh	N	1 321	1.5%	77.6%	2.4%	0.0%	0.8%	0.0%	0.8%	2.0%	0.9%	3.8%	3.0%	3.4%	0.0%	3.8%
	P2O5	607	1.6%	57.7%	5.3%	0.0%	1.6%	0.0%	2.5%	2.5%	1.6%	8.0%	6.0%	9.0%	0.0%	4.1%
	K2O	435	1.3%	56.1%	3.9%	0.0%	2.3%	0.0%	5.2%	2.6%	2.6%	8.0%	5.0%	9.0%	0.0%	3.9%
	N+P+K	2 363	1.5%	68.5%	3.4%	0.0%	1.3%	0.0%	2.0%	2.3%	1.4%	5.6%	4.2%	5.9%	0.0%	3.9%
Malaysia	N	629	0.0%	13.1%	0.2%	0.0%	0.0%	74.8%	0.0%	0.0%	0.2%	0.1%	3.0%	2.4%	0.0%	6.2%
	P2O5	348	0.0%	11.9%	0.2%	0.0%	0.0%	71.2%	0.0%	0.0%	0.2%	0.1%	6.0%	4.0%	0.0%	6.4%
	K2O	1 237	0.0%	5.0%	0.1%	0.0%	0.0%	90.3%	0.0%	0.0%	0.1%	0.1%	0.5%	0.4%	0.0%	3.7%
	N+P+K	2 214	0.0%	8.4%	0.1%	0.0%	0.0%	82.9%	0.0%	0.0%	0.1%	0.1%	2.1%	1.5%	0.0%	4.8%

		CEREALS				OILSEEDS			FRUITS/VEG							
		Wheat	Rice	Maize	Oth Ce	Soy	Palm	Oth OS	Fibre	Sugar	R&T	Fruits	Veg	Grass	Residual	
Total (kt)		%	%	%	%	%	%	%	%	%	%	%	%	%	%	
Turkey	N	1 493	42.0%	1.0%	8.0%	11.0%	0.2%	0.0%	5.5%	3.3%	2.1%	1.5%	10.0%	8.0%	0.0%	7.5%
	P2O5	570	43.0%	0.8%	7.0%	12.0%	0.3%	0.0%	5.5%	2.7%	3.0%	1.8%	8.0%	6.5%	0.0%	9.4%
	K2O	117	5.0%	1.5%	7.5%	3.0%	0.8%	0.0%	6.0%	2.3%	13.0%	7.5%	25.0%	20.0%	0.0%	8.4%
	N+P+K	2 180	40.3%	1.0%	7.7%	10.8%	0.2%	0.0%	5.5%	3.1%	2.9%	1.9%	10.3%	8.3%	0.0%	8.0%
Mexico	N	1 506	5.4%	0.5%	59.1%	3.3%	0.0%	0.5%	0.6%	0.8%	6.5%	0.6%	9.9%	5.7%	0.0%	7.1%
	P2O5	367	2.9%	0.7%	38.0%	1.6%	1.5%	1.2%	0.5%	1.6%	9.4%	1.0%	20.4%	12.1%	0.0%	9.0%
	K2O	218	1.2%	0.8%	8.8%	0.2%	1.1%	1.5%	0.1%	1.5%	28.5%	2.0%	29.9%	16.7%	0.0%	7.6%
	N+P+K	2 090	4.5%	0.6%	50.2%	2.7%	0.4%	0.7%	0.5%	1.0%	9.3%	0.8%	13.8%	7.9%	0.0%	7.5%
Ukraine	N	1 181	27.0%	0.1%	28.0%	12.0%	3.0%	0.0%	18.0%	0.0%	3.0%	3.0%	0.5%	1.2%	2.0%	2.2%
	P2O5	214	19.0%	0.2%	22.0%	10.0%	6.0%	0.0%	25.0%	0.0%	6.0%	3.0%	1.0%	2.0%	2.0%	3.8%
	K2O	225	18.0%	0.1%	21.0%	9.0%	6.0%	0.0%	23.0%	0.0%	9.0%	5.0%	1.0%	2.0%	2.0%	3.9%
	N+P+K	1 620	24.7%	0.1%	26.2%	11.3%	3.8%	0.0%	19.6%	0.0%	4.2%	3.3%	0.6%	1.4%	2.0%	2.6%
Argentina	N	830	26.5%	0.4%	25.5%	10.0%	8.1%	0.0%	2.1%	0.4%	3.0%	1.2%	4.2%	1.2%	6.0%	11.4%
	P2O5	590	21.9%	0.3%	20.2%	10.3%	34.3%	0.0%	2.2%	0.1%	0.2%	1.1%	1.5%	1.1%	3.4%	3.4%
	K2O	72	0.0%	5.9%	1.9%	0.3%	10.1%	0.0%	1.9%	0.1%	1.7%	8.5%	25.4%	17.0%	0.0%	27.1%
	N+P+K	1 491	23.4%	0.6%	22.3%	9.7%	18.5%	0.0%	2.1%	0.2%	1.8%	1.5%	4.2%	1.9%	4.7%	9.0%
Egypt	N	1 122	21.2%	13.6%	23.7%	1.5%	0.1%	0.0%	2.2%	3.0%	7.0%	3.0%	8.0%	13.0%	0.0%	3.7%
	P2O5	181	14.4%	5.6%	13.7%	4.4%	0.2%	0.0%	3.3%	3.9%	11.1%	8.3%	11.1%	18.3%	0.0%	5.6%
	K2O	63	19.0%	0.0%	12.7%	4.8%	0.0%	0.0%	1.6%	3.2%	11.1%	7.9%	14.3%	20.6%	0.0%	4.8%
	N+P+K	1 366	20.2%	11.9%	21.9%	2.1%	0.1%	0.0%	2.3%	3.1%	7.7%	3.9%	8.7%	14.1%	0.0%	4.0%
Belarus	N	515	15.8%	0.0%	22.3%	28.6%	0.0%	0.0%	10.8%	0.2%	3.3%	0.9%	0.1%	0.2%	8.3%	9.7%
	P2O5	151	17.9%	0.0%	21.1%	35.2%	0.0%	0.0%	10.0%	2.0%	5.2%	1.8%	0.1%	0.3%	0.6%	5.9%
	K2O	609	14.3%	0.0%	20.1%	31.5%	0.0%	0.0%	8.9%	0.9%	3.5%	1.2%	0.1%	0.2%	7.5%	11.8%
	N+P+K	1 275	15.4%	0.0%	21.1%	30.8%	0.0%	0.0%	9.8%	0.7%	3.6%	1.1%	0.1%	0.2%	7.0%	10.2%
Iran	N	929	33.2%	6.2%	4.7%	6.7%	0.1%	0.0%	2.6%	1.2%	3.1%	4.0%	16.0%	11.0%	5.6%	5.6%
	P2O5	150	37.0%	5.8%	5.6%	5.8%	1.0%	0.0%	5.1%	1.8%	3.8%	5.0%	13.0%	8.0%	4.1%	4.0%
	K2O	68	14.3%	2.9%	2.9%	2.9%	1.4%	0.0%	8.6%	1.4%	7.0%	7.0%	28.0%	17.0%	3.3%	3.3%
	N+P+K	1 147	32.6%	6.0%	4.7%	6.4%	0.3%	0.0%	3.3%	1.3%	3.4%	4.3%	16.3%	11.0%	5.3%	5.3%

		CEREALS				OILSEEDS			FRUITS/VEG							
		Wheat	Rice	Maize	Oth Ce	Soy	Palm	Oth OS	Fibre	Sugar	R&T	Fruits	Veg	Grass	Residual	
Total (kt)		%	%	%	%	%	%	%	%	%	%	%	%	%	%	
Japan	N	396	9.3%	29.0%	0.0%	0.5%	1.2%	0.0%	0.0%	0.0%	3.8%	5.4%	11.4%	19.2%	4.8%	15.4%
	P2O5	359	9.7%	32.1%	0.0%	1.3%	3.1%	0.0%	0.0%	0.0%	3.8%	8.0%	6.4%	19.3%	4.6%	11.7%
	K2O	283	7.7%	30.9%	0.0%	1.2%	3.2%	0.0%	0.0%	0.0%	2.7%	6.7%	8.9%	20.5%	5.3%	12.9%
	N+P+K	1 037	9.0%	30.6%	0.0%	0.9%	2.4%	0.0%	0.0%	0.0%	3.5%	6.7%	9.0%	19.6%	4.9%	13.4%
Philippines	N	636	0.0%	53.0%	21.0%	0.0%	0.0%	0.5%	2.0%	0.0%	7.0%	0.7%	9.0%	1.0%	0.0%	5.8%
	P2O5	132	0.0%	54.0%	15.0%	0.0%	0.0%	1.5%	0.0%	0.0%	10.0%	2.2%	11.0%	2.0%	0.0%	4.3%
	K2O	163	0.0%	30.0%	7.0%	0.0%	0.0%	3.0%	15.0%	0.0%	13.0%	1.3%	25.0%	2.0%	0.0%	3.7%
	N+P+K	931	0.0%	49.1%	17.7%	0.0%	0.0%	1.1%	4.0%	0.0%	8.5%	1.0%	12.1%	1.3%	0.0%	5.2%
New-Zealand	N	428	2.0%	0.0%	1.0%	2.0%	0.0%	0.0%	0.1%	0.2%	0.0%	0.4%	2.5%	2.0%	89.7%	0.1%
	P2O5	357	2.0%	0.0%	1.0%	2.0%	0.0%	0.0%	0.1%	0.2%	0.0%	0.4%	2.5%	2.0%	89.5%	0.3%
	K2O	132	2.0%	0.0%	1.0%	2.0%	0.0%	0.0%	0.1%	0.2%	0.0%	1.2%	5.0%	4.0%	84.2%	0.3%
	N+P+K	917	2.0%	0.0%	1.0%	2.0%	0.0%	0.0%	0.1%	0.2%	0.0%	0.5%	2.9%	2.3%	88.8%	0.2%
South Africa	N	437	4.7%	0.0%	61.3%	1.7%	1.1%	0.0%	2.8%	0.2%	7.3%	2.9%	6.1%	4.4%	5.4%	2.1%
	P2O5	193	4.6%	0.0%	48.8%	1.9%	4.3%	0.0%	6.5%	0.2%	9.2%	4.7%	4.7%	5.0%	6.9%	3.4%
	K2O	128	1.3%	0.0%	14.8%	0.7%	3.7%	0.0%	2.7%	0.2%	36.5%	6.0%	18.3%	9.2%	3.8%	2.8%
	N+P+K	758	4.1%	0.0%	50.2%	1.6%	2.3%	0.0%	3.7%	0.2%	12.7%	3.9%	7.8%	5.4%	5.5%	2.5%
Uzbekistan	N	570	33.0%	1.2%	1.1%	1.8%	0.0%	0.0%	1.1%	42.0%	0.0%	1.2%	6.0%	6.0%	2.0%	4.6%
	P2O5	120	32.0%	1.5%	1.2%	1.8%	0.0%	0.0%	0.9%	40.0%	0.0%	2.9%	6.0%	7.0%	2.0%	4.7%
	K2O	25	15.0%	10.0%	2.5%	1.5%	0.0%	0.0%	0.8%	55.0%	0.0%	2.0%	2.0%	7.5%	1.5%	2.2%
	N+P+K	715	32.2%	1.6%	1.2%	1.8%	0.0%	0.0%	1.1%	42.1%	0.0%	1.5%	5.9%	6.2%	2.0%	4.5%
Morocco	N	225	39.0%	0.2%	4.3%	15.5%	0.0%	0.0%	3.0%	0.0%	4.0%	2.5%	15.5%	10.5%	0.0%	5.5%
	P2O5	217	38.0%	0.1%	3.6%	12.5%	0.0%	0.0%	4.0%	0.0%	3.5%	3.0%	16.0%	12.0%	0.0%	7.3%
	K2O	29	17.0%	0.1%	1.2%	4.0%	0.0%	0.0%	3.0%	0.0%	5.0%	5.0%	44.0%	19.0%	0.0%	1.8%
	N+P+K	471	37.2%	0.2%	3.8%	13.4%	0.0%	0.0%	3.5%	0.0%	3.8%	2.9%	17.5%	11.7%	0.0%	6.1%
Chile	N	193	19.0%	0.8%	13.0%	6.6%	0.0%	0.0%	0.8%	0.2%	1.3%	3.0%	17.0%	3.4%	20.0%	15.0%
	P2O5	129	18.0%	1.2%	6.7%	6.7%	0.0%	0.0%	0.6%	0.2%	1.2%	7.0%	8.0%	3.0%	32.4%	15.0%
	K2O	101	6.0%	2.4%	8.3%	2.4%	0.0%	0.0%	1.2%	0.2%	4.5%	9.0%	36.0%	8.0%	15.0%	7.0%
	N+P+K	423	15.6%	1.3%	10.0%	5.6%	0.0%	0.0%	0.8%	0.2%	2.0%	5.6%	18.8%	4.4%	22.6%	13.1%

		CEREALS				OILSEEDS			FRUITS/VEG							
		Wheat	Rice	Maize	Oth Ce	Soy	Palm	Oth OS	Fibre	Sugar	R&T	Fruits	Veg	Grass	Residual	
		Total (kt)	%	%	%	%	%	%	%	%	%	%	%	%	%	
ROW	N	6 520	11.7%	15.1%	15.0%	5.8%	0.6%	2.2%	4.9%	5.0%	5.4%	3.2%	9.5%	13.9%	0.0%	7.7%
	P2O5	2 365	9.1%	14.2%	12.8%	6.2%	5.9%	3.0%	5.3%	5.5%	7.1%	2.9%	9.6%	16.2%	0.0%	2.2%
	K2O	1 954	3.6%	13.0%	9.7%	2.0%	3.8%	9.8%	2.7%	3.0%	13.0%	3.1%	10.4%	17.0%	0.0%	8.9%
	N+P+K	10 839	9.7%	14.5%	13.6%	5.2%	2.3%	3.7%	4.6%	4.7%	7.1%	3.1%	9.7%	15.0%	0.0%	6.7%
World	N	102 496	18.2%	15.2%	17.8%	4.7%	1.1%	1.4%	5.3%	4.1%	3.6%	2.1%	6.1%	7.4%	4.7%	8.3%
	P2O5	45 933	14.6%	12.5%	13.9%	3.6%	9.7%	1.9%	4.5%	3.8%	3.6%	2.5%	8.8%	9.9%	4.0%	6.7%
	K2O	33 520	7.4%	11.0%	14.2%	2.7%	12.3%	8.0%	2.8%	2.4%	6.3%	2.5%	8.5%	10.6%	3.8%	7.6%
	N+P+K	181 949	15.3%	13.7%	16.2%	4.0%	5.4%	2.7%	4.6%	3.7%	4.1%	2.3%	7.2%	8.6%	4.3%	7.8%

'Oth Ce' = other cereals
'Soy' = soybean
'Palm' = oil palm

'Oth OS' = other oilseeds
'R&T' = roots & tubers
'Veg' = vegetables

'Grass' = grassland
'Oth Cr' = other crops
'ROW' = rest of the world



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