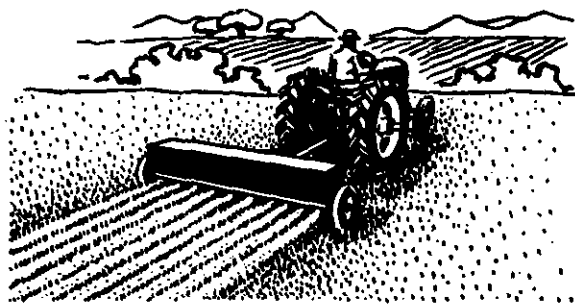


Consumption of



Commercial Fertilizers

in the United States

Year ended June 30, 1969

with Comparisons

Preliminary Report



October 27, 1969

**UNITED STATES DEPARTMENT OF AGRICULTURE
Statistical Reporting Service ●● Crop Reporting Board
SpCr 7(10-69)
Washington, D. C.**

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CONSUMPTION OF COMMERCIAL FERTILIZERS IN THE UNITED STATES
For Fiscal Year Ended June 30, 1969 ^{1/}

TOTAL FERTILIZER USE DOWN SLIGHTLY

Fertilizer consumption in the United States and Puerto Rico during the year ended June 30, 1969 is estimated at 38.7 million tons by the Crop Reporting Board. This is down less than one-half of one percent from a year earlier compared to 4 percent and 7 percent increases for the years ended June 30, 1968 and 1969. The small increase in primary nutrient fertilizer was offset by a decline in secondary and micronutrient tonnage applied directly to the soil as fertilizer.

Fertilizer consumption was unchanged to lower in all but the South Central and Mountain regions. Illinois was the leading State in terms of total tonnage used with 3.2 million, barely edging California, last year's leader. Fertilizer use was unchanged in 4 of the 48 States with half the rest showing increases and half decreases.

MIXED FERTILIZER USAGE UP SLIGHTLY

Mixed fertilizer used by both farm and non-farm users was 21.4 million tons--slightly higher than the 21.3 million tons used a year earlier. Mixtures accounted for 55.2 percent of total tonnage of all fertilizer for the 1968-69 year, compared with 55.0 percent the previous year.

The primary nutrient content of mixed fertilizer advanced to 38.8 percent compared to 38.2 a year earlier. The average percentage content of N-P₂O₅-K₂O was respectively 9.0-17.2-12.6. This compares with the previous year averages of 8.8-16.8-12.7

PRIMARY NUTRIENT MATERIALS FOR DIRECT APPLICATION GAIN 1 PERCENT

The use of direct application primary plant nutrient materials increased 1 percent during the year ended June 30, 1969. Primary nutrients (N, P₂O₅ and K₂O) usage totaled 16.0 million tons. Secondary and micronutrient materials reported for direct application were 1.3 million tons. All direct application materials accounted for 44.8 percent of total tonnage used.

Nitrogen materials (excluding natural organics) used for direct application at 10.6 million tons were down less than 1 percent. Phosphate materials totaled 2.8 million tons, up 2 percent. All potash materials at 2.0 million tons increased 9 percent. Tons of natural organics at 0.5 million tons were down 7 percent.

Fertilizer consumption is defined as all commercial fertilizer materials or products sold or shipped for farm and non-farm use as fertilizer. Materials used in manufacture of registered mixes or for uses other than as fertilizer are excluded from totals.

To convert phosphoric oxide (P₂O₅) to elemental phosphorus (P), the quantity of P₂O₅ should be multiplied by 0.43642. To convert potassium oxide (K₂O) to elemental potassium (K) multiply by 0.83016.

MICRONUTRIENTS

Data were collected from all known primary producers of selected micronutrients. The estimates in the tables on page 4 are totals of individual reports for all firms. The amounts are as reported and are being published in the elemental form.

^{1/} The cooperation of individual State fertilizer control officials and the voluntary reporting of fertilizer manufacturers have made this publication possible. Increases shown for some States may be partly due to improved tabulation procedures by the control officials.

MICRONUTRIENTS SOLD FOR FERTILIZER IN THE UNITED STATES

Region of Application	Quantity of the Element Sold				
	Copper	Iron	Manganese	Zinc	Molybdenum
JULY 1, 1967 - JUNE 30, 1968 1/					
	-----Tons-----				
NEW ENGLAND (Me., N.H., Vt., Mass., R.I., Conn.)	26.4	3.5	33.2	198.6	.1
MID-ATLANTIC (N.Y., N.J., Pa., Del., D.C., Md., W.Va.)	168.7	26.4	466.2	319.3	5.2
SOUTH ATLANTIC (Va., N.C., S.C., Ga., Fla.)	1,868.0	469.3	4,496.4	3,850.5	7.4
EAST NORTH CENTRAL (Ohio, Ind., Ill., Mich., Wis.) ...	76.0	125.3	5,232.8	1,711.7	34.6
WEST NORTH CENTRAL (Minn., Iowa, Mo., N.Dak., S. Dak., Nebr., Kans.)	87.8	88.0	767.6	4,958.5	14.9
EAST SOUTH CENTRAL (Ky., Tenn., Ala., Miss.)	17.0	7.9	175.4	284.8	1.0
WEST SOUTH CENTRAL (Ark., La., Okla., Texas)	21.0	120.6	138.8	815.6	14.4
MOUNTAIN (Mont., Idaho, Wyo., Colo., N. Mex., Ariz., Utah, Nev.)	26.6	575.4	97.3	854.4	.4
PACIFIC (Wash., Oreg., Calif.)	116.9	2,040.0	160.4	1,496.1	1.6
Alaska, Hawaii, Puerto Rico	2.0	3.1	14.3	5.5	---
UNITED STATES	2,410.4	3,459.5	11,582.4	14,495.0	79.6

JULY 1, 1968 - JUNE 30, 1969

Region of Application	Quantity of the Element Sold				
	Copper	Iron	Manganese	Zinc	Molybdenum
	-----Tons-----				
NEW ENGLAND (Me., N.H., Vt., Mass., R.I., Conn.)	32.6	2.2	29.1	88.8	---
MID-ATLANTIC (N.Y., N.J., Pa., Del., D.C., Md., W.Va.)	157.5	13.8	181.4	1,547.7	1.1
SOUTH ATLANTIC (Va., N.C., S.C., Ga., Fla.)	938.8	305.6	2,406.3	6,407.8	17.0
EAST NORTH CENTRAL (Ohio, Ind., Ill., Mich., Wis.) ...	70.4	236.8	3,704.1	2,054.0	16.9
WEST NORTH CENTRAL (Minn., Iowa, Mo., N.Dak., S.Dak., Nebr., Kans.)	42.9	61.3	2,588.6	4,197.5	11.1
EAST SOUTH CENTRAL (Ky., Tenn., Ala., Miss.)	23.9	20.2	242.1	757.3	2.0
WEST SOUTH CENTRAL (Ark., La., Okla., Texas)	14.0	130.6	83.4	656.9	13.8
MOUNTAIN (Mont., Idaho, Wyo., Colo., N. Mex., Ariz., Utah, Nev.)	14.0	152.4	128.6	1,658.0	.4
PACIFIC (Wash., Oreg., Calif.)	91.3	1,954.2	229.7	2,460.0	2.2
Alaska, Hawaii, Puerto Rico	1.8	1.7	.1	1.9	---
UNITED STATES	1,387.2	2,878.8	9,593.4	19,829.9	64.5

1/ Revised.

Table 1.--Total fertilizer 1/: Consumption by kind of fertilizer, by States, years ended June 30, 1968 and 1969 2/

State and division	Mixtures		Direct-application material 3/				Total		1969 as percent of 1968
	1968	1969	Primary nutrient		Secondary & micro-nutrient		1968	1969	
			1968	1969	1968	1969			
Tons									
Percent									
Maine	160,767	152,714	6,470	5,709	5	5	167,242	158,428	95
N. H.	14,642	15,308	2,603	2,757	17	29	17,262	18,094	105
Vt.	31,564	33,142	8,725	10,780	34	30	40,323	43,952	109
Mass.	61,896	60,039	16,233	17,486	84	65	78,213	77,590	99
R. I.	11,622	13,009	2,612	3,179	2	0	14,236	16,188	114
Conn.	58,306	60,728	13,383	14,906	32	32	71,721	75,666	106
W. E.	338,797	334,940	50,026	54,817	174	161	388,997	389,918	100
N. Y.	563,083	546,191	85,549	80,349	146	193	648,778	626,733	97
N. J.	209,497	190,611	28,873	28,015	1,170	444	239,540	219,070	91
Pa.	535,103	527,076	119,531	124,186	4,507	4,962	659,141	656,224	100
Del.	100,382	91,348	16,615	15,111	398	350	117,395	106,809	91
D. of Col.	4,836	6,674	925	1,116	20	16	5,781	7,806	135
Md.	317,781	289,442	54,200	50,108	321	320	372,302	339,870	91
W. Va.	48,610	47,100	20,636	20,207	139	32	69,385	67,339	97
M. A.	1,779,292	1,698,442	326,329	319,092	6,701	6,317	2,112,322	2,023,851	96
Va.	672,040	666,664	149,652	159,598	20,171	19,096	841,863	845,358	100
N. C.	1,324,046	1,257,389	372,283	365,582	65,320	67,019	1,761,649	1,689,990	96
S. C.	714,853	666,310	219,518	234,833	5,976	4,970	940,347	906,113	96
Ge.	1,427,191	1,334,746	496,536	528,080	54,549	56,290	1,978,276	1,919,116	97
Fla.	1,495,844	1,601,527	223,997	276,910	7,041	5,870	1,726,882	1,804,307	109
S. A.	5,633,974	5,526,636	1,461,986	1,565,003	153,057	153,245	7,249,017	7,244,884	100
Ohio	962,956	943,012	408,559	407,001	1,553	1,600	1,373,068	1,351,613	98
Ind.	1,244,641	1,207,302	662,030	610,691	1,014	825	1,907,685	1,818,818	95
Ill.	1,409,377	1,347,280	1,787,705	1,839,963	2,199	3,316	3,199,281	3,190,559	100
Mich.	625,810	579,577	202,868	218,277	5,133	4,551	833,811	802,405	96
Wis.	426,470	415,800	389,733	395,406	1,476	1,183	817,679	812,389	99
E. N. C.	4,669,254	4,492,971	3,450,895	3,471,338	11,375	11,475	8,131,524	7,975,784	98
Minn.	637,852	780,200	598,668	763,682	1,315	1,300	1,237,835	1,545,182	125
Iowa	986,149	946,703	1,432,530	1,308,907	3,943	4,061	2,422,622	2,259,671	93
Mo.	939,799	949,119	495,858	412,277	328	388	1,435,965	1,361,784	95
N. Dak.	183,677	195,270	177,940	149,282	90	144	361,707	344,696	95
S. Dak.	111,039	103,823	128,294	155,375	14	147	239,347	259,345	108
Nebr.	285,539	276,984	919,930	777,078	21,351	27,705	1,226,820	1,081,767	88
Kans.	396,635	400,976	674,437	684,925	1,091	2,172	1,072,163	1,088,073	101
W. N. C.	3,540,690	3,653,075	4,427,657	4,251,526	28,132	35,917	7,996,479	7,940,518	99
Ky.	532,547	547,528	210,064	255,969	357	350	742,968	803,847	108
Tenn.	610,506	626,711	162,244	196,746	129	129	772,879	823,586	107
Ala.	743,898	734,889	310,374	310,107	487	1,850	1,052,759	1,046,846	99
Miss.	408,266	407,114	308,555	347,837	111	125	716,932	755,076	105
E. S. C.	2,293,217	2,316,242	991,237	1,110,659	1,084	2,454	3,285,538	3,429,355	104
Ark.	311,128	340,917	219,823	235,531	302	146	531,253	576,594	109
La.	320,308	293,115	203,801	208,676	411	350	524,520	502,141	96
Okl.	238,458	263,935	296,173	296,062	173	7	534,804	560,004	105
Texas	849,851	1,121,046	1,035,152	1,156,985	4,647	4,100	1,889,650	2,282,131	121
W. S. C.	1,719,745	2,019,013	1,754,949	1,897,254	5,533	4,603	3,480,227	3,920,870	113
Mont.	55,654	58,683	110,595	127,352	1,289	1,318	167,538	187,353	112
Idaho	53,381	73,612	264,333	347,494	10,679	13,700	328,393	434,806	132
Wyo.	18,399	18,683	34,234	57,733	477	368	53,110	76,784	145
Colo.	81,666	87,844	171,239	163,083	2,673	4,013	255,578	254,940	100
N. Mex.	25,645	28,774	70,829	66,043	56	54	96,530	94,871	98
Ariz.	39,975	48,130	203,467	210,788	15,659	14,550	259,101	273,468	106
Utah	28,100	30,348	53,773	59,330	400	375	82,273	90,053	109
Nev.	3,467	3,909	8,261	9,112	4,122	4,194	15,850	17,215	109
Mount.	306,287	349,983	916,731	1,040,935	35,355	38,572	1,258,373	1,429,490	114
Wash.	130,665	129,544	421,820	379,208	15,607	12,846	568,092	521,598	92
Oreg.	58,443	65,688	331,154	341,070	13,345	4,316	402,942	421,074	104
Calif.	560,265	552,086	1,606,464	1,480,434	1,343,557	1,094,777	3,510,286	3,067,297	87
Pac.	749,373	747,318	2,359,438	2,200,712	1,372,509	1,061,939	4,481,320	4,009,969	89
48 States & D. C.	21,030,629	21,138,620	15,739,248	15,911,336	1,613,920	1,314,683	38,383,797	38,364,639	100
Alaska	2,500	2,800	1,620	1,555	0	0	4,120	4,355	106
Hawaii	92,360	91,321	73,559	76,745	3,069	3,356	168,988	171,422	101
Puerto Rico	168,086	145,562	18,021	14,899	8	13	186,115	160,474	86
U. S.	21,293,575	21,378,303	15,832,448	16,004,535	1,616,997	1,318,052	38,743,020	38,700,890	100

1/ Excludes liming materials. 2/ 1969 preliminary. 3/ Excludes materials used in commercial mixtures. 4/ 1968 Revised.

Table 2.--Nitrogen materials: Consumption of nitrogen materials by direct application, by States, years ended June 30, 1968 and 1969 1/

State and division	Ammonia				Ammonium			
	Anhydrous		Acid		Nitrate		Sulfate	
	1968	1969	1968	1969	1968	1969	1968	1969
Tons								
Maine	0	0	0	0	2,471	2,758	36	56
N. H.	2	0	0	0	61	511	0	16
Vt.	5	5	0	0	694	800	8	10
Mass.	0	0	0	0	1,396	1,368	796	778
R. I.	0	0	0	0	65	52	0	0
Conn.	12	6	0	0	1,154	1,142	18	25
N. E.	19	11	0	0	5,641	6,531	858	885
N. Y.	4,012	3,430	254	245	12,847	12,741	874	1,470
N. J.	340	364	211	175	7,092	6,439	344	199
Pa.	2,569	2,693	205	200	14,069	16,875	5,489	6,295
Del.	369	350	0	0	1,647	1,950	0	0
D. of Col.	0	0	0	0	115	157	0	8
Ma.	5,621	6,633	0	0	4,202	5,463	163	204
W. Va.	0	0	0	0	5,468	4,694	171	152
M. A.	12,911	13,470	670	620	45,440	48,319	7,041	8,328
Va.	317	265	127	131	14,543	18,051	535	550
N. C.	9,944	11,143	0	0	31,976	36,016	105	296
S. C.	4,313	6,762	0	0	17,230	23,850	0	0
Ga.	58,161	64,109	0	0	122,124	149,278	0	0
Fla.	6,925	7,145	2	18	46,115	60,741	3,885	4,044
S. A.	79,660	89,424	129	149	231,986	287,936	4,525	4,890
Ohio	60,406	73,634	11,300	10,500	44,534	40,974	13,682	11,157
Ind.	172,358	159,795	31,001	27,729	41,479	36,662	3,650	3,387
Ill.	362,933	334,107	126,533	93,239	124,796	112,664	21,605	18,648
Mich.	34,370	33,466	2,684	6,134	31,046	31,462	1,832	1,567
Wis.	33,267	25,216	7,528	8,322	27,431	30,457	1,326	957
E. N. C.	663,334	626,220	179,046	145,924	269,286	252,419	42,095	35,716
Minn.	167,610	236,870	14,461	11,850	69,560	89,623	1,153	4,762
Iowa	525,256	425,457	111,611	87,057	100,911	96,020	560	461
Mo.	131,976	112,557	3,882	1,894	107,512	87,819	609	312
N. Dak.	4,334	6,433	0	0	41,780	50,889	384	1,153
S. Dak.	13,006	21,617	2,072	2,864	48,519	51,363	5,872	124
Nebr.	420,093	338,486	13,895	14,746	145,744	107,882	5,961	2,719
Kans.	193,444	224,686	388	1,308	185,488	197,306	3,144	1,553
W. N. C.	1,455,719	1,366,036	145,309	126,719	699,514	660,922	17,703	11,094
Ky.	18,702	30,017	3,200	3,500	76,185	93,211	741	754
Tenn.	15,002	19,306	0	0	66,601	87,597	0	0
Ala.	17,547	19,373	0	0	123,677	145,274	2,649	4,183
Miss.	39,874	35,439	300	200	149,144	162,542	276	250
E. S. C.	91,125	104,135	3,500	3,700	415,607	488,624	3,666	5,167
Ark.	9,851	11,903	376	619	75,222	70,318	3,296	3,857
La.	35,593	28,619	4,212	3,209	79,496	91,277	19,134	18,987
Okla.	35,244	45,867	2,893	2,100	129,282	127,819	2,743	1,359
Texas	336,064	371,306	12,537	30,537	167,316	193,156	126,569	106,524
W. S. C.	416,752	457,695	20,029	36,465	451,316	482,580	151,742	130,727
Mont.	1,996	1,538	441	516	14,163	35,028	1,636	4,704
Idaho	15,679	25,717	13,226	6,645	47,053	73,906	69,792	67,989
Wyo.	1,652	2,125	0	0	16,508	29,766	1,076	3,278
Colo.	37,220	39,427	183	209	44,877	42,771	10,004	11,119
N. Mex.	19,524	23,288	186	563	2,488	1,919	11,290	4,930
Ariz.	58,368	58,846	9,982	12,268	7,604	13,388	13,427	11,438
Utah	260	250	87	87	8,681	8,496	9,900	9,400
Nev.	1,118	1,005	55	0	259	424	1,651	1,360
Mount.	135,817	152,266	24,160	20,288	141,633	205,698	118,776	134,218
Wash.	63,367	54,106	85,449	64,466	50,401	39,840	46,408	49,177
Oreg.	13,586	11,060	33,311	36,648	14,429	14,746	99,198	97,583
Calif.	139,900	128,431	294,211	258,788	50,115	63,602	342,391	298,060
Pac.	216,853	193,597	412,971	359,902	114,945	118,188	487,997	444,840
48 States & D. C.	3,072,190	3,002,904	785,803	623,767	2,375,570	2,571,317	834,403	775,885
Alaska	0	0	0	0	889	723	100	300
Hawaii	0	0	23,600	22,937	0	943	2,657	3,140
Puerto Rico	0	0	4,140	4,048	0	0	6,126	3,979
U. S.	3,072,190	3,002,904	813,543	720,772	2,376,459	2,572,963	843,286	783,304

1/ 1969 preliminary.

Table 2.--Nitrogen materials: Consumption of nitrogen materials by direct application, by States, years ended June 30, 1968 and 1969 1/--Continued

State and division	Nitrogen Solution		Sodium Nitrate		Urea		Other	
	1968	1969	1968	1969	1968	1969	1968	1969
	Tons							
Maine	747	573	45	0	543	261	0	21
N. H.	132	334	48	27	252	138	426	50
Vt.	1,153	1,300	2	3	225	270	95	122
Mass.	260	250	259	340	489	600	120	150
R. I.	0	0	47	7	146	279	235	171
Conn.	1,282	1,401	206	221	925	1,221	136	69
N. E.	3,574	3,858	607	598	2,580	2,769	1,012	583
N. Y.	20,390	19,221	2,655	2,210	6,164	5,880	2,695	1,605
N. J.	1,470	1,840	1,248	769	909	1,713	1,439	1,828
Pa.	25,583	29,999	974	617	15,739	17,049	616	921
Del.	9,334	7,373	51	50	514	475	128	120
D. of Col.	45	9	22	60	25	74	30	15
Md.	22,701	16,820	1,375	1,266	3,637	4,364	454	385
W. Va.	1,936	1,632	772	295	567	666	248	205
M. A.	81,459	76,894	7,097	5,267	27,555	30,221	5,610	5,079
Va.	71,047	72,481	8,289	5,009	2,072	3,491	10,316	10,588
N. C.	191,259	210,733	37,256	27,182	2,586	2,675	44,561	43,193
S. C.	125,321	140,777	24,807	12,398	791	2,761	27,679	26,646
Ge.	261,654	262,548	18,355	8,378	0	0	11,483	18,306
Fla.	49,756	54,710	8,595	8,335	2,229	2,337	11,465	14,576
S. A.	699,037	741,249	97,302	61,302	7,678	11,264	105,504	113,309
Ohio	77,329	72,718	331	292	38,126	33,825	783	300
Ind.	221,511	193,661	38	0	17,831	15,242	4,451	3,472
Ill.	240,735	213,673	581	110	9,325	7,770	6,007	5,439
Mich.	36,115	29,990	352	409	22,213	22,523	472	776
Wis.	54,756	59,192	50	50	3,350	2,991	328	0
E. N. C.	630,446	569,234	1,352	861	90,845	82,351	12,041	9,987
Minn.	60,707	80,387	0	0	3,275	2,650	131	200
Iowa	145,294	124,953	0	0	8,050	6,440	0	0
Mo.	70,055	74,430	37	31	10,919	8,982	5,209	610
N. Dak.	15,006	18,879	0	0	2,365	1,736	0	0
S. Dak.	21,731	31,915	0	0	614	859	184	557
Nebr.	178,739	186,127	539	181	11,757	6,831	0	0
Kans.	162,906	152,801	0	0	43,536	35,742	572	400
W. N. C.	654,438	669,492	576	212	80,516	63,240	6,096	1,767
Ky.	25,775	34,216	2,656	2,534	2,571	2,387	2,924	2,200
Tenn.	41,527	44,565	8,062	8,347	0	0	1,246	1,300
Ala.	71,846	69,920	9,104	5,916	3,798	4,303	10,528	2,500
Miss.	39,981	43,373	15,047	7,937	12,361	30,638	1,039	800
E. S. C.	179,129	192,074	34,869	24,734	18,730	37,328	15,737	6,800
Ark.	35,575	37,086	7,071	5,201	54,402	68,006	92	35
La.	16,075	19,579	4,406	1,788	17,865	18,803	0	22
Okl.	53,907	54,735	37	10	15,522	11,507	473	400
Texas	60,442	84,097	0	0	68,768	70,262	420	0
W. S. C.	165,999	195,497	11,514	6,996	156,557	168,578	985	457
Mont.	4,944	5,000	0	0	299	264	1	0
Idaho	27,213	32,079	0	0	11,547	15,663	1,113	2,400
Wyo.	3,492	6,778	0	0	616	168	0	3,309
Colo.	15,359	14,824	0	0	2,184	1,552	3,912	5,886
N. Mex.	7,993	9,220	6	0	6,278	3,662	904	822
Ariz.	19,712	22,589	0	0	27,512	27,624	4,578	4,465
Utah	1,300	1,300	0	0	900	950	195	200
Nev.	22	22	0	0	439	675	80	326
Mount.	80,035	91,812	6	0	49,775	50,558	10,783	17,408
Wash.	41,708	44,953	0	0	24,262	26,999	11,035	15,858
Oreg.	15,873	16,698	0	0	33,982	35,130	5,145	4,988
Calif.	93,495	74,011	47	13	43,374	56,713	17,929	21,083
Pac.	151,076	135,662	47	13	101,618	118,842	34,109	41,929
48 States & D. C.	2,645,193	2,675,772	153,370	99,983	535,854	565,151	191,877	197,319
Alaska	0	0	0	0	8	8	75	90
Hawaii	231	290	15	35	9,551	12,496	336	250
Puerto Rico	0	0	0	0	4,837	4,069	1,479	1,026
U. S.	2,645,424	2,676,062	153,385	100,018	550,250	581,724	193,767	198,685

1/ 1969 preliminary.

Table 3.--Phosphate materials: Consumption of phosphate materials by direct application, by States, years ended June 30, 1968 and 1969 1/

State and division	Phosphate rock 2/		Superphosphate				Ammonium Phosphates 3/		Other	
	1968	1969	Grades 22 percent or under		Grades over 22 percent		1968	1969	1968	1969
			1968	1969	1968	1969				
	Tons									
Maine	0	0	574	281	336	175	0	0	103	90
N. H.	0	0	648	614	57	70	0	19	44	61
Vt.	0	0	5,037	5,500	260	345	340	350	24	25
Mass.	48	50	1,200	1,300	125	150	575	300	420	450
R. I.	0	0	70	230	19	60	50	160	155	510
Conn.	4	12	1,640	1,735	943	997	71	54	131	153
N. E.	52	62	9,269	10,660	1,740	1,797	1,036	883	877	1,289
N. Y.	368	334	14,127	12,540	3,709	3,580	2,257	1,675	409	232
N. J.	0	0	1,751	729	691	643	16	12	650	541
Pa.	2,152	1,250	16,579	16,996	3,678	4,671	5,578	5,109	616	0
Del.	184	200	1,153	1,095	563	825	17	20	10	20
D. of Col.	14	2	25	49	5	0	0	0	20	89
Md.	361	325	1,589	1,571	2,267	1,904	2,567	2,313	347	310
W. Va.	50	33	5,454	4,173	3,667	5,233	45	15	25	25
M. A.	3,129	2,144	40,676	37,153	14,520	17,156	10,480	9,144	2,277	1,217
Va.	1,973	2,248	9,348	9,433	13,359	17,026	332	300	174	368
N. C.	732	3	13,808	9,496	1,057	2,771	284	514	3,465	978
S. C.	0	0	4,916	5,001	805	671	18	10	5,745	4,571
Ga.	395	400	2,964	4,441	780	750	1,549	1,350	6,536	6,320
Fla.	5,902	6,922	5,440	9,389	1,472	968	747	764	3,764	1,980
S. A.	9,002	9,573	36,476	37,760	17,474	22,186	2,930	2,938	19,684	14,217
Ohio	3,060	3,397	5,025	3,528	28,312	28,516	2,780	250	1,842	999
Ind.	4,383	4,150	2,758	2,100	20,193	18,578	5,519	5,378	414	171
Ill.	97,367	114,946	14,326	26,078	299,870	355,978	7,469	8,902	17,892	15,647
Mich.	260	230	2,341	2,093	3,703	7,321	403	591	716	538
Wis.	940	506	5,589	5,563	38,723	43,051	877	1,049	316	0
E. N. C.	106,010	123,229	30,039	39,372	390,071	453,444	17,053	16,170	21,180	17,355
Minn.	449	737	11,850	11,134	76,996	136,331	11,934	7,677	439	965
Iowa	2,332	3,102	21,432	15,467	229,640	243,418	2,739	2,513	396	412
Mo.	127,414	87,837	912	139	6,717	6,546	253	411	119	59
N. Dak.	0	0	0	0	30,337	17,361	79,099	47,689	0	0
S. Dak.	0	0	476	4,644	14,309	16,225	14,629	16,936	752	0
Nebr.	0	0	28,944	17,109	49,370	37,619	16,134	11,065	246	227
Kans.	2,308	381	3,262	491	27,670	27,892	27,019	10,027	1	4
W. N. C.	132,503	92,057	66,926	48,984	435,319	485,392	192,007	96,318	1,953	1,667
Ky.	5,634	2,432	9,421	7,233	24,126	29,764	1,151	1,220	296	188
Tenn.	60	60	4,315	3,926	6,121	8,402	874	900	1,970	1,800
Ala.	0	0	24,211	19,426	1,096	800	376	0	35,208	28,500
Miss.	719	950	13,823	8,806	1,987	5,163	598	795	25,645	42,673
E. S. C.	6,413	3,442	51,770	39,391	33,330	44,149	2,999	2,915	63,119	73,161
Ark.	105	0	4,638	5,366	6,298	6,596	2,384	1,874	23	4
La.	502	644	7,184	7,543	2,088	3,424	5,754	2,520	3,533	3,526
Okla.	3,966	2,032	8,890	8,604	16,739	14,600	11,983	8,601	131	620
Texas	1,866	1,000	35,754	25,840	37,791	28,086	165,355	223,743	0	2,000
W. S. C.	6,439	3,676	56,466	47,353	62,916	52,708	185,476	236,738	3,692	6,150
Mont.	19	5	0	0	20,454	18,034	60,565	54,442	4,676	5,150
Idaho	34	20	709	425	33,289	39,117	28,818	40,981	8,747	15,866
Wyo.	0	0	0	0	6,746	6,366	2,934	1,972	70	0
Colo.	0	0	784	751	20,050	14,905	8,729	8,217	3,252	591
N. Mex.	0	0	5,875	4,939	8,246	9,599	6,636	5,286	395	458
Ariz.	0	0	1,266	535	2,508	1,438	47,258	48,105	4,882	3,703
Utah	0	0	2,100	1,600	16,950	27,867	12,765	8,550	155	160
Nev.	0	0	176	230	1,145	976	2,716	3,050	0	0
Mount.	53	25	10,910	8,480	109,388	120,302	170,421	170,603	22,177	25,936
Wash.	147	266	3,741	2,694	19,460	14,442	43,378	34,923	1,863	2,291
Oreg.	0	0	16,872	18,755	11,195	12,466	73,374	78,879	293	221
Calif.	302	8,169	77,144	73,691	9,149	9,211	138,686	124,103	14,383	15,267
Pac.	449	8,435	97,756	95,140	39,804	36,119	255,438	237,905	16,539	17,779
48 States & D. C.	264,050	242,643	400,290	364,293	1,105,422	1,233,233	797,840	773,614	151,492	158,771
Alaska	0	0	2	2	15	20	388	255	2	2
Hawai	1,590	1,698	965	3,804	3,864	3,266	5,239	5,273	13,963	12,175
Puerto Rico	0	0	90	736	130	122	187	101	0	0
U. S.	265,640	244,341	401,347	368,835	1,109,431	1,236,661	803,654	779,243	165,463	170,948

1/ 1969 preliminary. 2/ Includes colloidal phosphates. 3/ Total of 11-48-0, 13-39-0, 16-20-0, 21-53-0, and 27-14-0 grades.

Table 4.--Potash and natural organic materials: Consumption of potash and natural organic materials by direct applications, by States, years ended June 30, 1968 and 1969 1/

State and division	Potash materials				Natural organic	
	Chloride 50-62 percent grades		Other		1968	1969
	1968	1969	1968	1969		
	Tons					
Maine	548	413	90	60	877	1,021
N. H.	269	161	7	101	657	655
Vt.	696	800	20	50	166	200
Mass.	810	1,070	179	180	9,556	10,500
R. I.	146	187	0	3	1,679	1,520
Conn.	1,934	2,424	212	149	4,715	5,297
N. E.	4,403	5,055	508	543	17,650	19,193
N. Y.	2,108	2,194	1,291	1,375	11,389	11,617
N. J.	3,834	3,918	222	203	8,656	8,642
Pa.	9,652	7,438	1,623	631	14,209	13,442
Del.	2,067	2,115	180	200	398	318
D. of Col.	4	10	2	3	618	640
Md.	5,492	5,519	707	708	2,717	2,323
W. Va.	1,563	2,410	2	33	668	341
M. A.	24,720	23,604	4,027	3,153	38,655	37,323
Va.	14,497	17,074	1,442	1,049	1,281	1,534
N. C.	6,952	7,879	26,264	10,474	2,034	2,229
S. C.	5,682	5,645	746	4,582	1,464	1,159
Ga.	5,765	6,000	4,442	4,000	2,328	2,200
Fla.	21,071	15,709	27,441	61,981	29,188	27,291
S. A.	53,967	52,307	60,335	82,086	36,295	34,413
Ohio	113,767	120,083	1,287	813	5,995	6,015
Ind.	132,023	135,984	1,403	1,375	3,018	2,807
Ill.	444,525	518,934	548	1,038	13,193	12,790
Mich.	52,934	67,424	1,263	1,792	12,159	11,954
Wis.	201,957	207,433	1,641	1,750	11,584	8,864
E. N. C.	945,206	1,049,858	6,142	6,768	45,949	42,430
Minn.	166,938	165,814	7,935	1,682	5,230	6,000
Iowa	282,587	302,387	18	0	1,634	1,200
Mo.	29,720	26,395	1,142	616	3,382	3,699
N. Dak.	4,520	5,050	0	0	115	112
S. Dak.	6,672	7,628	46	115	132	518
Nebr.	31,827	33,546	16,096	19,940	585	600
Kans.	22,821	27,798	0	3,436	1,678	1,100
W. N. C.	541,085	568,618	25,237	25,789	12,756	13,169
Ky.	25,450	35,794	9,699	9,299	1,533	1,200
Tenn.	12,982	17,343	1,912	1,750	1,572	1,450
Ala.	8,372	8,140	852	800	1,110	972
Miss.	6,416	6,921	938	950	407	400
E. S. C.	53,220	68,198	13,401	12,799	4,622	4,022
Ark.	19,520	23,717	553	599	412	350
La.	3,148	5,891	3,472	2,178	1,339	669
Okla.	11,782	14,615	884	1,158	1,697	2,035
Texas	8,104	7,129	3,961	4,293	10,205	9,000
W. S. C.	42,554	51,352	8,870	8,228	13,653	12,054
Mont.	1,126	2,448	50	0	225	215
Idaho	3,567	4,894	3,337	1,662	209	60
Wyo.	848	1,842	60	95	232	34
Colo.	8,531	7,302	889	1,379	15,265	14,150
N. Mex.	205	222	572	502	231	633
Ariz.	394	450	436	122	5,540	5,817
Utah	170	160	10	10	300	300
Nev.	0	0	0	0	600	1,044
Mount.	14,841	17,318	5,354	3,770	22,602	22,253
Wash.	18,528	14,437	4,963	3,784	7,110	10,972
Oreg.	8,091	8,068	1,519	1,617	4,287	4,211
Calif.	8,021	7,897	10,307	9,231	367,010	332,144
Pac.	34,640	30,402	16,789	14,632	378,407	347,327
48 States & D. C.	1,714,636	1,866,712	140,663	157,768	570,589	532,184
Alaska	35	38	46	52	60	65
Hawaii	3,938	3,746	7,399	6,457	211	215
Puerto Rico	431	313	514	420	87	85
U. S.	1,719,040	1,870,809	148,622	164,697	570,947	532,549

1/ 1969 preliminary.

Table 5.--Primary plant nutrients: Consumption of primary plant nutrients by kind of fertilizer, by States, years ended June 30, 1968 and 1969 1/

State and division	Mixtures								
	N		Available P ₂ O ₅		K ₂ O		Total		
	1968	1969	1968	1969	1968	1969	1968	1969	1969 as percent of 1968
Tons									Percent
Maine	16,310	15,730	21,333	20,616	20,893	20,158	58,536	56,504	97
N. H.	1,568	1,684	1,584	1,638	1,773	1,868	4,925	5,190	105
Vt.	2,901	3,082	4,261	4,507	4,949	5,203	12,111	12,792	106
Mass.	6,205	6,064	5,893	5,644	5,558	5,283	17,656	16,991	96
R. I.	1,119	1,249	1,167	1,275	1,104	1,223	3,390	3,747	111
Conn.	6,581	6,984	5,643	5,769	4,857	4,919	17,081	17,672	103
N. E.	34,684	34,793	39,881	39,449	39,134	38,654	113,699	112,896	99
N. Y.	55,743	57,350	78,460	76,467	62,547	60,081	196,760	193,898	99
N. J.	18,621	17,155	23,167	21,348	20,240	18,108	62,028	56,611	91
Pa.	47,497	47,437	74,985	75,372	63,183	61,141	185,665	183,950	99
Del.	8,127	7,491	11,583	10,596	13,799	12,789	33,509	30,876	92
D. of Col.	459	641	414	581	289	400	1,162	1,622	140
Md.	25,241	23,155	36,857	33,865	41,708	38,206	103,806	95,226	92
W. Va.	3,260	3,297	6,231	6,076	5,810	5,652	15,301	15,025	98
M. A.	158,948	156,526	231,707	224,305	207,576	196,377	598,231	577,208	96
Va.	35,341	36,000	70,613	70,666	78,430	78,000	185,384	184,666	100
N. C.	66,148	64,127	128,082	121,967	156,719	150,887	350,949	336,981	96
S. C.	33,371	31,983	73,402	67,297	97,441	91,284	204,214	190,564	93
Ga.	79,964	77,415	148,293	137,479	208,798	197,542	437,055	412,436	94
Fla.	111,601	121,716	93,531	99,295	163,172	169,762	368,304	390,773	106
S. A.	327,425	331,241	513,921	496,704	704,560	687,475	1,545,906	1,515,420	98
Ohio	82,064	82,042	191,705	190,488	150,498	147,110	424,267	419,640	99
Ind.	95,124	94,170	271,446	265,606	223,423	213,692	589,993	573,468	97
Ill.	119,476	117,213	312,324	301,791	169,812	154,937	597,612	573,941	96
Mich.	55,089	52,162	125,236	117,654	103,355	96,210	283,680	266,026	94
Wis.	32,620	34,096	95,812	95,634	82,227	79,002	210,929	208,732	99
E. N. C.	384,373	379,683	996,523	971,173	725,615	690,951	2,106,511	2,041,807	97
Minn.	64,618	62,361	172,318	173,823	93,450	114,831	330,386	411,015	124
Iowa	92,530	88,990	250,129	240,463	129,107	124,965	471,766	454,418	96
Mo.	106,305	109,149	158,082	161,350	152,554	151,859	416,941	422,358	101
N. Dak.	29,933	32,024	63,758	67,954	6,444	6,834	100,135	106,812	107
S. Dak.	20,473	19,000	31,675	29,590	2,227	2,699	54,975	51,289	93
Nebr.	39,552	37,393	92,174	89,466	10,001	9,871	141,727	136,730	96
Kans.	61,950	62,151	139,658	141,946	19,167	20,049	220,775	224,146	102
W. N. C.	415,361	431,068	907,794	944,592	413,550	431,108	1,736,705	1,806,768	104
Ky.	36,017	38,327	73,229	76,106	78,073	80,487	187,319	194,920	104
Tenn.	43,830	45,123	83,353	86,486	84,690	87,740	211,873	219,349	104
Ala.	42,878	44,093	101,686	106,559	100,684	102,884	245,248	253,536	103
Miss.	31,251	31,348	60,258	61,881	60,108	61,881	151,617	155,110	102
E. S. C.	153,976	158,691	318,526	331,032	323,555	332,992	796,057	822,915	103
Ark.	24,168	26,932	56,411	62,388	56,627	62,729	137,206	152,049	111
La.	30,851	29,605	51,761	49,243	45,468	41,915	128,080	120,763	94
Okla.	29,760	32,992	65,835	75,221	19,701	21,907	115,296	130,120	113
Texas	114,230	145,736	161,472	224,209	67,988	87,442	344,190	457,387	133
W. S. C.	199,509	235,265	335,479	411,061	189,784	213,993	724,772	860,319	119
Mont.	12,199	12,910	14,025	14,964	973	704	27,197	28,578	105
Idaho	12,429	17,152	20,194	29,445	556	810	33,179	47,407	143
Wyo.	3,974	4,110	5,563	5,605	25	37	9,562	9,752	102
Colo.	14,378	15,636	27,701	29,955	1,447	1,318	43,526	46,909	108
N. Mex.	3,644	4,143	7,247	8,201	801	863	11,692	13,207	113
Ariz.	5,858	7,027	12,091	14,246	865	963	18,814	22,236	118
Utah	5,214	5,766	10,631	12,139	282	243	16,127	18,148	113
Nev.	552	684	350	371	151	195	1,053	1,250	119
Mount.	58,248	67,428	97,802	114,926	5,100	5,133	161,150	187,487	116
Wash.	17,705	18,395	27,720	27,852	10,289	10,364	55,714	56,611	102
Oreg.	8,492	9,853	13,712	16,422	3,847	4,401	26,051	30,676	118
Calif.	73,124	73,427	76,086	76,188	34,180	37,542	183,390	187,157	102
Pac.	99,321	101,675	117,518	120,462	48,316	52,307	265,155	274,444	104
48 States & D. C.	1,831,845	1,896,570	3,559,151	3,653,704	2,677,190	2,648,990	8,048,186	8,199,264	102
Alaska	362	364	465	518	319	350	1,146	1,232	108
Hawaii	13,357	13,516	9,315	9,406	19,366	18,812	42,038	41,734	99
Puerto Rico	21,227	18,923	10,209	9,025	20,326	17,759	52,062	45,707	88
U. S.	1,867,091	1,929,373	3,579,140	3,672,653	2,697,201	2,685,911	8,143,432	8,287,937	102

1/ 1969 preliminary.

Table 5.--Primary plant nutrients: Consumption of primary nutrients by kind of fertilizer, by States, years ended June 30, 1968 and 1969 1/--Continued

State and division	Mixtures and direct-application materials 2/									
	N		Available P ₂ O ₅		K ₂ O		Total			
	1968	1969	1968	1969	1968	1969	1968	1969	1969 as percent of 1968	
	Tons									
	Percent									
Maine	17,654	17,005	21,672	20,802	21,259	20,434	60,585	58,241	96	
N. H.	1,859	2,058	1,771	1,839	1,952	1,993	5,582	5,890	106	
Vt.	3,693	4,003	5,580	6,169	5,339	5,667	14,612	15,839	108	
Mass.	7,787	7,641	6,739	6,603	6,235	6,090	20,761	20,334	98	
R. I.	1,339	1,525	1,311	1,599	1,210	1,361	3,860	4,485	116	
Conn.	8,079	8,609	6,561	6,723	6,175	6,547	20,795	21,879	105	
N. E.	40,391	40,841	43,634	43,735	42,170	42,092	126,195	126,668	100	
N. Y.	74,471	74,900	84,874	81,691	64,447	62,128	223,392	218,719	98	
N. J.	23,030	21,880	24,220	22,144	22,801	20,678	70,051	64,702	92	
Pa.	72,407	76,836	83,597	83,904	69,708	66,233	225,712	226,973	101	
Del.	12,408	11,023	12,101	11,224	15,106	14,089	39,615	36,336	92	
D. Of Col.	562	779	448	640	300	416	1,310	1,835	140	
Md.	40,952	38,468	39,640	35,154	45,395	38,591	125,987	112,213	94	
W. Va.	6,197	5,804	9,075	9,511	6,778	7,145	22,050	22,460	102	
M. A.	230,027	229,690	253,555	244,268	224,535	209,280	708,117	683,238	97	
Va.	67,900	69,262	78,841	80,639	87,492	88,560	234,233	238,461	102	
N. C.	164,704	161,399	131,939	125,764	167,632	158,817	464,275	445,980	96	
S. C.	85,695	91,302	75,356	69,058	101,129	96,208	262,180	256,568	106	
Ge.	250,524	262,033	150,675	140,056	213,162	201,938	614,361	604,027	98	
Fla.	153,801	173,941	97,174	103,097	181,938	192,563	432,913	469,601	108	
S. A.	722,624	757,937	533,985	518,614	751,353	738,086	2,007,962	2,014,637	100	
Ohio	194,539	199,349	208,418	205,283	220,286	218,248	623,243	622,880	100	
Ind.	339,308	314,419	284,445	277,532	303,117	295,837	926,870	887,788	96	
Ill.	579,442	530,643	457,534	488,159	437,280	467,261	1,474,256	1,486,063	101	
Mich.	115,939	111,522	128,223	122,309	136,088	137,966	380,250	371,797	98	
Wis.	90,486	87,331	115,811	117,439	205,261	205,052	411,558	409,822	100	
E. N. C.	1,319,714	1,243,264	1,194,431	1,210,722	1,302,032	1,324,364	3,816,177	3,778,350	99	
Minn.	251,241	339,789	214,131	280,269	196,199	213,900	661,571	833,958	126	
Iowa	632,855	533,611	361,144	356,498	298,957	306,707	1,292,956	1,196,816	93	
Mo.	280,091	299,800	165,433	167,326	168,543	168,114	614,067	595,240	98	
N. Dak.	62,454	66,403	111,586	96,794	9,201	9,915	183,241	173,112	94	
S. Dak.	57,985	66,626	43,295	44,768	6,901	7,342	108,181	118,736	110	
Nebr.	500,213	418,355	124,408	112,751	32,604	36,202	657,225	567,308	86	
Kans.	354,989	375,136	159,228	156,883	32,901	37,593	547,118	569,612	104	
W. N. C.	2,139,828	2,059,720	1,179,225	1,215,289	745,306	779,773	4,064,359	4,054,782	98	
Ky.	88,297	107,934	86,792	92,022	97,502	105,910	272,591	305,866	112	
Tenn.	92,997	106,025	87,856	91,958	93,109	98,613	273,962	296,596	108	
Ala.	125,773	133,250	109,886	113,025	105,940	107,987	341,599	354,262	104	
Miss.	135,368	144,137	66,756	70,371	64,279	66,400	266,403	280,908	105	
E. S. C.	442,435	491,346	351,290	367,376	360,830	378,910	1,154,555	1,237,632	107	
Ark.	95,845	104,659	60,736	66,883	68,496	77,163	225,077	248,705	110	
La.	106,491	103,723	56,744	53,824	48,289	46,068	211,524	203,615	96	
Okla.	127,370	136,179	78,110	85,903	27,085	31,061	232,565	253,143	109	
Texas	550,674	635,546	225,388	297,399	73,914	92,826	849,996	1,025,771	121	
W. S. C.	880,400	980,107	420,978	504,009	217,784	247,118	1,519,162	1,731,234	114	
Mont.	30,429	37,712	44,188	40,886	1,688	2,199	76,305	80,797	106	
Idaho	76,945	107,307	48,838	66,441	4,382	4,495	130,165	178,243	137	
Wyo.	12,998	20,091	9,442	9,831	550	1,177	22,990	31,099	135	
Colo.	70,456	72,866	41,807	40,137	7,231	6,650	119,494	119,653	100	
N. Mex.	29,342	30,380	14,097	15,200	1,097	1,120	44,536	46,700	105	
Ariz.	87,893	92,348	29,750	30,353	1,421	1,342	119,064	124,043	104	
Utah	13,237	12,955	22,722	27,931	394	348	36,353	41,234	113	
Nev.	2,619	2,811	1,556	1,497	165	195	4,340	4,503	104	
Mount.	323,919	376,470	212,400	232,276	16,928	17,526	553,247	626,272	113	
Wash.	145,370	132,744	48,139	43,979	23,722	20,808	217,231	197,531	91	
Oreg.	84,711	85,480	40,289	45,222	9,086	9,635	134,086	140,337	105	
Calif.	407,124	385,902	149,086	144,375	53,819	56,515	610,069	586,792	96	
Pac.	637,245	604,126	237,514	233,576	86,627	86,958	961,386	924,660	96	
48 States & D. C.	6,736,583	6,783,501	4,427,012	4,569,865	3,747,565	3,824,107	14,911,160	15,177,473	102	
Alaska	754	728	626	621	362	397	1,742	1,746	100	
Hawaii	24,024	25,971	15,302	15,578	23,792	22,905	63,118	64,454	102	
Puerto Rico	26,204	22,640	10,390	9,261	20,853	18,165	57,447	50,066	87	
U. S.	6,787,565	6,832,840	4,453,330	4,595,325	3,792,572	3,865,574	15,033,467	15,293,739	102	

1/ 1969 Preliminary. 2/ Materials guaranteed to contain one or more primary plant nutrients.

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