2021-2022 Vermont Fertilizer Analysis Report



Vermont Agency of Agriculture, Food and Markets Public Health & Agricultural Resource Management 116 State Street Montpelier, VT 05620-2901

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Introduction

The Agency of Agriculture, Food and Markets fertilizer analysis report provides data on all samples collected, fertilizer analyses conducted, and their results from the previous two years. The purpose of the sampling and testing is to ensure that fertilizer consumers are receiving products that conform to the guarantee for all labeled nutrients, and to assess penalties as authorized.

In 2021, a total of 107 fertilizer samples were collected and analyzed, and 28 product samples failed to meet the label guarantee for one or more nutrients. In 2022, a total of 98 fertilizer samples were collected and analyzed, and 39 failed to meet the label guarantee. For 2021 samples, the Vermont Agricultural and Environmental Laboratory conducted 358 chemical analyses for nitrogen, available phosphorous, potash, and numerous secondary nutrients such as calcium, magnesium, sulfur, iron, zinc, and boron. For 2022 samples, the laboratory conducted 344 chemical analyses for nitrogen, available phosphorous, potash, and secondary nutrients. The report also contains historical data.

Fertilizer manufacturers may be assessed penalties for product nutrient deficiencies that exceed the permitted analytical variance. The dollar value of a penalty is based on how far below the guarantee a sample is, the total weight of the lot sampled, and the cost of the nutrient that is deficient. If a consumer cannot be identified, the penalty is paid to the Agency's fertilizer program.

New in the 2023 registration year is the ability for the Agency to register soil amendments, plant amendments, and plant biostimulants, in addition to the previous categories of fertilizer and lime. Products may be registered in multiple categories of products, e.g., a product can be registered as both a fertilizer and a soil amendment, or as a fertilizer and a pesticide. Data is current as of 1/13/22.

- 94.5% fertilizer,
- 5.6% soil amendments,
- 2.2% plant biostimulants, and
- 1.3% plant amendments.

If you have any questions regarding this report or Vermont's Fertilizer Program, please contact the Public Health and Agriculture Resource Management Division; Vermont Agency of Agriculture, Food and Markets; 116 State Street; Montpelier, VT 05620-2901, or call (802) 828-5050.

Fertilizer Summary Tables 2021 Fertilizer Companies with 10 or More Samples Taken

Company	Samples Collected	Nutrients Analyzed	# of Nutrient Violations
Green Mountain Fertilizer	10	27	2
North Country Organics	12	34	0
Northeast Ag Sales	49	144	12
Total	71	205	14

2022 Fertilizer Companies with $10\ \mathrm{or}\ \mathrm{More}\ \mathrm{Samples}\ \mathrm{Taken}$

Company	Samples Collected	Nutrients Analyzed	# of Nutrient Violations
Bourdeau Bros.	15	52	6
Green Mountain Fertilizer	20	61	15
Lawes Ag Services Inc	10	31	5
Northeast Ag Sales	20	70	9
Total	65	214	35

Tonnage Summary Data 2021

All tonnage values are as reported by January 15, 2021. Twenty-twenty-two tonnage will be reported in the 2022-2023 Annual Report.

Total fertilizer tonnage reported summary

January 1, 2021-December 31, 2021

	Total (tons)	Container (tons)			Use (tons)			
		Bag	Bulk	Liquid	Agricultural	Nonagricultural		
Multi- nutrient	10,987	1,096	8,957	934	10,664	322		
Nitrogen	10,404	43	8,712	1,649	10,391	13		
Phosphate	3	2	1	0	3	0		
Potash	3,334	17	3,316	1	3,322	11		
Sec/Micro	922	192	728	2	866	56		
Misc.*	39,344	7,501	26,560	5,283	34,275	5,069		
Total	64,994	8,851	48,274	7,869	59,521	5,471		
*Misc. = lime	e, calcite, co	mpost, fille	er, etc.					

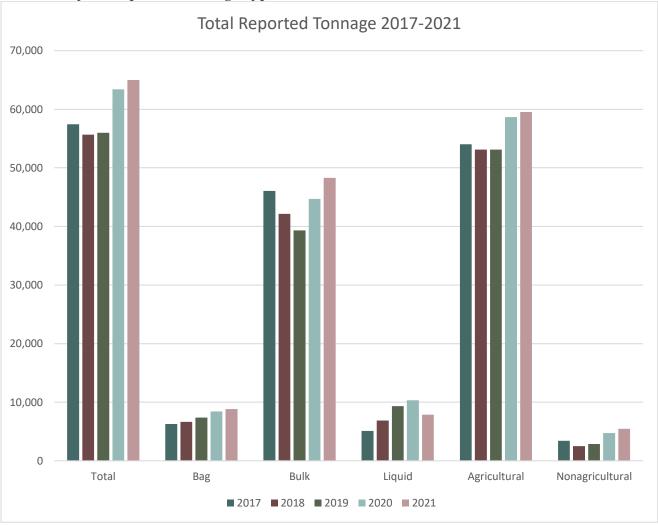
Note: Nitrogen means fertilizer containing nitrogen only i.e., 32-0-0 or 46-0-0.

Phosphate means fertilizer containing phosphate only i.e., 0-22-0 or 0-46-0.

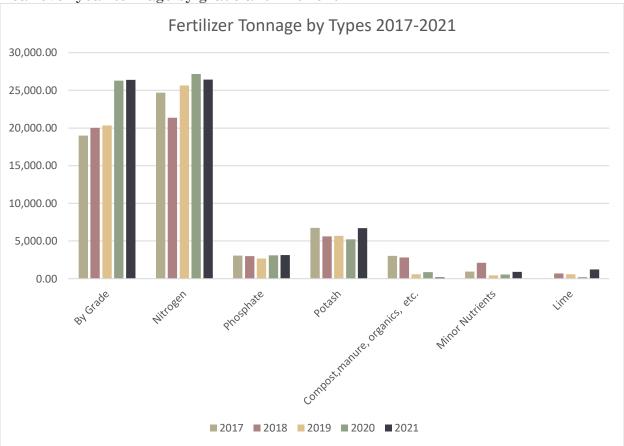
Potash means fertilizer containing Potash only i.e., 0-0-60 or 0-0-22.

Multi-nutrient means fertilizer containing a combination of nitrogen, phosphorous and/or potash.

Year over year reported tonnage type and material

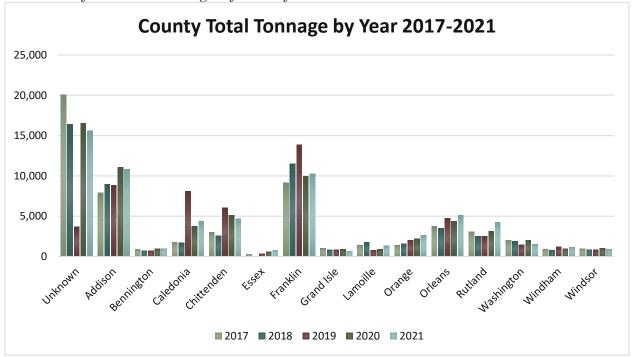


Year over year tonnage by grade and nutrient



Note that it was not required to report tonnage for non-fertilizer products such as soil amendments and lime prior to 2022. Nitrogen means products that contained only nitrogen, Phosphate means products that contained only phosphate and Potash means products that contained only Potash. By grade means products that included combinations of nitrogen, phosphate, and potash.

Year over year total tonnage by county



County	2017	2018	2019	2020	2021
Unknown*	20,052	16,415	3,664	16,526	15,568
Addison	7,882	8,949	8,845	11,045	10,841
Bennington	896	706	736	958	977
Caledonia	1,763	1,713	8,092	3,736	4,341
Chittenden	3,000	2,588	6,069	5,139	4,693
Essex	296	47	325	564	767
Franklin	9,153	11,503	13,876	9,976	10,235
Grand Isle	1,008	847	820	891	655
Lamoille	1,415	1,787	776	895	1,320
Orange	1,364	1,586	2,017	2,173	2,645
Orleans	3,728	3,518	4,753	4,367	5,126
Rutland	3,072	2,494	2,515	3,114	4,231
Washington	2,009	1,869	1,469	2,036	1,532
Windham	868	764	1,213	988	1,172
Windsor	943	859	828	1,007	890
Total	57,449	55,644	55,997	63,416	64,993

^{*}Unknown means the reporter did not include the county where the fertilizer was distributed.

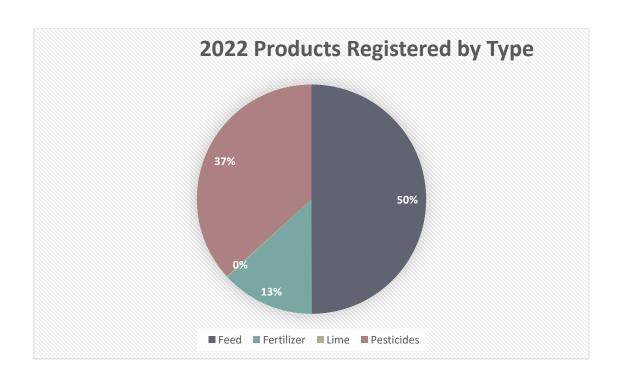
Tons of N-P-K by County 2021

COUNTY	Tons N	Tons P	Tons K
**Unknown	4,403	1,013	1,793
Addison	2,839	589	900
Bennington	119	25	47
Caledonia	666	301	398
Chittenden	243	169	695
Essex	112	24	51
Franklin	2,825	391	946
Grand Isle	127	28	35
Lamoille	241	42	129
Orange	496	98	272
Orleans	1,251	134	657
Rutland	874	186	428
Washington	298	19	139
Windham	194	21	218
Windsor	144	46	101
Total	14,831	3,086	6,810

This chart shows the tonnage broken out by nutrient for each county. For example, the amount of nitrogen listed for each county is the actual amount of nitrogen applied devoid of fillers and other nutrients. If a farmer bought a 100 lb. bag of 5-10-10 in Montpelier, 5 pounds of nitrogen, 10 pounds of phosphorous and 10 pounds of potash would be counted towards the numbers for Washington county. Therefore 1,532 tons of fertilizer was reported distributed in Washington County in 2021, of that 298 tons was nitrogen, 19 tons was phosphorus, and 139 tons was potash. The balance of the tonnage would have been micronutrients, fillers, compost, etc. **Unknown means the reporter did not include the county where the fertilizer was distributed.

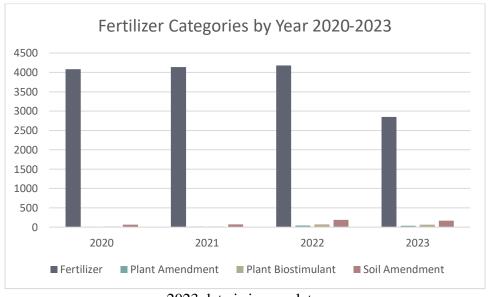
of Total Products Registered by VAAFM

Product Registered	2022	Percentage
Feed	16,620	50%
Fertilizer	4,363	13%
Lime	60	<1%
Pesticides	12,209	37%
Total	33,520	100%





Note: Data reported as of 01/12/2023. Feed registration year ends on February 15, 2023.



2023 data is incomplete.

Appendix A

Pass: A sample receives a pass status if the guarantee for nitrogen, phosphorous or potash it is equal to or greater than the test results.

Fail: A Sample is considered deficient if the guarantee for nitrogen, phosphorous or potash exceeds The Association of American Plant Food Control Officials' (AAPFCO) established permitted analytical variance at an established confidence level of 97.5%.

Within Tolerance: A sample is within tolerance if it is greater than the AAPFCO's established permitted analytical variance at an established confidence level of 97.5% but less than 100%.

2021 Fertilizer Sample Results

Sample ID	Business Name	NPK Guarantee	Lab Result N	Lab Result P	Lab Result K	Micronutrients	Sample Status
12-140621- 04	Lawes Agricultural Service Inc	15-15-15	12.95	14.70	15.90		Fail
12-040521- 00	Connecticut River Ag Services	15-5-25	13.05	5.51	26.90		Fail
12-040821- 00	Connecticut River Ag Services	10-10-10	7.30	11.80	8.65		Fail
12-040821- 01	Connecticut River Ag Services	19-19-19	22.80	16.45	17.30		Fail
12-041921- 01	Winfield Solutions LLC	10-10-10	8.38	9.18	9.91		Fail
12-042021- 03	Northeast Agricultural Sales Inc	24-6-12	21.50	6.27	11.40		Fail
452126	Northeast Agricultural Sales Inc	12-15-18	10.45	15.50	16.55	Pass	Fail
452127	Northeast Agricultural Sales Inc	23-12-18	23.00	10.55	19.20		Fail
452129	Northeast Agricultural Sales Inc	10-2-8	7.71	10.40	6.53		Fail
452130	Northeast Agricultural Sales Inc	6-14-13	7.26	17.60	11.65		Fail
452136	Northeast Agricultural Sales Inc	7.5-7.5	5.99	7.93	7.79	Pass	Fail

Sample ID	Business Name	NPK Guarantee	Lab Result N	Lab Result P	Lab Result K	Micronutrients	Sample Status
452137	Northeast Agricultural Sales Inc	14-14-14	12.05	11.85	10.50	Fail	Fail
452138	Northeast Agricultural Sales Inc	24-6-12	21.50	6.37	11.40		Fail
12-150321- 00	Lawes Agricultural Service Inc	24-12-18	24.90	9.38	18.50		Fail
12-042621- 01	Green Mountain Fertilizer Div. Ld. Oliver	23-12-18	23.90	14.10	12.55		Fail
12-042621- 02	Green Mountain Fertilizer Div. Ld. Oliver	15-15-15	13.25	16.20	15.00		Fail
452145	Northeast Agricultural Sales Inc	10-10-10	11.40	10.90	7.15		Fail
452147	Northeast Agricultural Sales Inc	19-19-19	19.30	19.60	12.25		Fail
452148	Northeast Agricultural Sales Inc	13-2-8	9.22	3.45	7.06		Fail
452150	Northeast Agricultural Sales Inc	39-0-0	37.27	.00	.00		Fail
1-0519-005	G Boucher Fertilizer	25-5-18	23.25	4.95	19.10	Pass	Fail
1-0519-006	Yara Canada Inc	46-0-0	44.55	.00	.00		Fail
1-0519-009	G Boucher Fertilizer	18-46-0	17.30	42.90	.00		Fail
12-061521- 00	Carovail	17-17-0	16.80	15.20	.38	Within Tolerance	Fail

Sample ID	Business Name	NPK Guarantee	Lab Result N	Lab Result P	Lab Result K	Micronutrients	Sample Status
12-041921- 00	Lawes Agricultural Service Inc	39-0-0	39.60	.00	.00	Fail	Fail
452103	Northeast Agricultural Sales Inc	10-20-20	9.89	21.00	23.90	Fail	Fail
452134	Northeast Agricultural Sales Inc	17.30-10- 16.20	16.70	10.10	15.20	Fail	Fail
452133	Northeast Agricultural Sales Inc	20-10-20	19.20	10.70	23.40	Fail	Fail
12-033121- 03	North Country Organics	5-3-4	5.17	3.90	4.15		Pass
12-033121- 04	North Country Organics	5-3-4	5.49	3.18	4.17		Pass
12-033121- 05	North Country Organics	5-3-4	5.00	3.58	4.33		Pass
12-033121- 08	North Country Organics	5-3-9	5.42	4.87	9.31		Pass
12-033121- 07	North Country Organics	5-3-9	2.33	3.23	3.42		Pass
12-033121- 09	North Country Organics	4-3-3	4.91	3.75	3.06		Pass
12-040821- 02	Connecticut River Ag Services	5-10-10	6.52	10.10	10.60		Pass
12-040821- 03	Green Mountain Fertilizer Div. Ld. Oliver	12-0-7	12.80	.00	9.81		Pass

Sample ID	Business Name	NPK Guarantee	Lab Result N	Lab Result P	Lab Result K	Micronutrients	Sample Status
12-040821- 04	Green Mountain Fertilizer Div. Ld. Oliver	12-0-7	12.90	.00	9.87		Pass
12-040821- 05	Green Mountain Fertilizer Div. Ld. Oliver	10-10-10	11.80	14.00	14.20		Pass
12-041921- 02	Lawes Agricultural Service Inc	46-0-0	46.00	.00	.00		Pass
452101	Northeast Agricultural Sales Inc	28-0-15	28.50	.00	15.15	Pass	Pass
452102	Northeast Agricultural Sales Inc	23-0-18	23.40	.00	18.30		Pass
452105	Northeast Agricultural Sales Inc	26-0-26	26.50	.00	27.00		Pass
452106	Northeast Agricultural Sales Inc	26-0-26	26.90	.00	27.50		Pass
452107	Northeast Agricultural Sales Inc	4-3-2	4.68	3.57	2.27		Pass
452109	Northeast Agricultural Sales Inc	4-3-2	4.65	3.92	2.02		Pass
452117	Darling Ingredients Inc	10-2-8	10.50	3.17	8.03		Pass
452123	Northeast Agricultural Sales Inc	45-0-0	46.10	.00	.00		Pass

Sample ID	Business Name	NPK Guarantee	Lab Result N	Lab Result P	Lab Result K	Micronutrients	Sample Status
12-042621- 00	Green Mountain Fertilizer Div. Ld. Oliver	0-20-20	.00	23.10	21.50		Pass
12-042621- 03	Green Mountain Fertilizer Div. Ld. Oliver	5-10-10	5.27	10.20	11.90		Pass
452142	Northeast Agricultural Sales Inc	23-12-28	24.20	12.20	18.30		Pass
452149	Northeast Agricultural Sales Inc	39-0-0	39.50	.00	.00		Pass
1-0519-008	G Boucher Fertilizer	0-0-60	.00	.00	66.00		Pass
1-0519-010	G Boucher Fertilizer	21-0-0	21.30	.00	.00	Pass	Pass
1-0519-014	Green Mountain Fertilizer Div. Ld. Oliver	10-10-10	12.20	11.00	10.10		Pass
08081821- 00	Bourdeau Brothers of Middlebury	21-0-0	21.40	.00	.00		Pass
08051821- 02	Bourdeau Brothers of Middlebury	0-0-60	.00	.00	64.20		Pass
12-140621- 03	Lawes Agricultural Service Inc	10-10-10	9.28	10.20	9.39		Within Tolerance
12-040621- 02	Lawes Agricultural Service Inc	5-10-10	5.18	10.60	9.15		Within Tolerance
12-040621- 01	Lawes Agricultural Service Inc	10-10-10	9.84	10.00	9.76		Within Tolerance

Sample ID	Business Name	NPK Guarantee	Lab Result N	Lab Result P	Lab Result K	Micronutrients	Sample Status
12-040621- 00	Lawes Agricultural Service Inc	5-10-10	4.96	9.84	11.30		Within Tolerance
12-033121- 00	North Country Organics	5-3-4	5.09	3.43	3.98		Within Tolerance
12-033121- 01	North Country Organics	5-3-4	4.80	3.84	3.99		Within Tolerance
12-033121- 02	North Country Organics	5-3-4	4.72	3.44	3.88		Within Tolerance
12-033121- 06	North Country Organics	4-6-4	4.69	6.68	3.99		Within Tolerance
12-033121- 10	North Country Organics	8-1-9	7.68	1.46	8.85		Within Tolerance
12-033121- 11	North Country Organics	10-0-0	9.71	.00	.00		Within Tolerance
12-040821- 06	Green Mountain Fertilizer Div. Ld. Oliver	5-10-10	6.89	13.20	9.92		Within Tolerance
1-0426-001	Bourdeau Brothers - Sheldon	46-0-0	45.30	.00	.00		Within Tolerance
1-0426-002	Yara Canada Inc	46-0-0	45.40	.00	.00		Within Tolerance
1-0426-004	Yara Canada Inc	46-0-0	45.40	.00	.00		Within Tolerance
1-0426-003	Bourdeau Brothers - Sheldon	31.80-0-12	31.00	.00	12.00	Pass	Within Tolerance
452104	Northeast Agricultural Sales Inc	26-0-26	26.60	.00	25.90		Within Tolerance

Sample ID	Business Name	NPK Guarantee	Lab Result N	Lab Result P	Lab Result K	Micronutrients	Sample Status
452108	Northeast Agricultural Sales Inc	4-3-2	4.46	3.55	1.94		Within Tolerance
452110	Northeast Agricultural Sales Inc	23-7-23	23.00	7.14	22.40		Within Tolerance
452111	Northeast Agricultural Sales Inc	0-0-41.50	.00	.00	40.50	Within Tolerance	Within Tolerance
452112	Northeast Agricultural Sales Inc	15-18-5	15.90	18.00	4.76		Within Tolerance
452113	Northeast Agricultural Sales Inc	24-6	25.70	5.19	18.20		Within Tolerance
452114	Northeast Agricultural Sales Inc	18	32.10	9.26	9.57		Within Tolerance
452115	Northeast Agricultural Sales Inc	25-5-15	26.80	4.70	15.60		Within Tolerance
452116	Northeast Agricultural Sales Inc	30-0-20	32.60	.00	19.50		Within Tolerance
452118	Darling Ingredients Inc	10-2-8	10.60	2.91	7.26		Within Tolerance
452119	Darling Ingredients Inc	10-2-8	11.20	2.46	7.28		Within Tolerance
452120	Darling Ingredients Inc	10-2-8	10.80	2.93	7.36	Pass	Within Tolerance
452121	Northeast Agricultural Sales Inc	19-6-18	18.30	6.05	17.70		Within Tolerance
452122	Northeast Agricultural Sales Inc	19-6-18	18.80	6.14	17.40		Within Tolerance

Sample ID	Business Name	NPK Guarantee	Lab Result N	Lab Result P	Lab Result K	Micronutrients	Sample Status
452124	Northeast Agricultural Sales Inc	10-0-42	9.36	.00	46.40		Within Tolerance
452125	Northeast Agricultural Sales Inc	6.60-8.10- 40.50	6.52	7.29	42.05		Within Tolerance
452128	Northeast Agricultural Sales Inc	10-20-20	11.00	20.10	18.90		Within Tolerance
452131	Northeast Agricultural Sales Inc	10-20-20	9.77	20.50	20.80		Within Tolerance
452132	Northeast Agricultural Sales Inc	0-0-60	.00	.00	59.00		Within Tolerance
452135	Northeast Agricultural Sales Inc	17.30-10- 16.20	18.50	9.98	16.10	Within Tolerance	Within Tolerance
452139	Northeast Agricultural Sales Inc	23-6-12	23.00	6.54	11.50		Within Tolerance
452140	Northeast Agricultural Sales Inc	23-5-23	24.40	4.64	22.65	Pass	Within Tolerance
452141	Northeast Agricultural Sales Inc	14-15-30	13.70	16.00	30.60		Within Tolerance
452143	Northeast Agricultural Sales Inc	10-8-12	10.40	7.96	11.60		Within Tolerance
452146	Northeast Agricultural Sales Inc	24-6-18	24.80	6.93	16.90		Within Tolerance
452151	Northeast Agricultural Sales Inc	14-14-14	13.30	13.85	13.35		Within Tolerance
1-0519-007	G Boucher Fertilizer	0-0-51	.00	.00	53.60	Within Tolerance	Within Tolerance
1-0519-011	G Boucher Fertilizer	0-0-22	.00	.00	20.80	Within Tolerance	Within Tolerance

Sample ID	Business Name	NPK Guarantee	Lab Result N	Lab Result P	Lab Result K	Micronutrients	Sample Status
1-0519-012	G Boucher Fertilizer	10-17-20	10.60	16.70	20.30	Pass	Within Tolerance
1-0519-013	Green Mountain Fertilizer Div. Ld. Oliver	10-20-20	9.45	20.20	18.90		Within Tolerance
08051821- 01	Bourdeau Brothers of Middlebury	18-46-0	17.40	48.00	.00		Within Tolerance
08051821- 03	Bourdeau Brothers of Middlebury	46-0-0	45.80	.00	.00		Within Tolerance
452144	Northeast Agricultural Sales Inc	24-12-18	24.30	13.30	16.90		Within Tolerance
12-061521- 01	Carovail	3-0-29	4.05	.00	29.40	Within Tolerance	Within Tolerance
12-061521- 02	Carovail	3-0-29	3.91	.00	29.90	Within Tolerance	Within Tolerance
12-061521- 03	Carovail	3-0-29	3.85	.00	28.40	Within Tolerance	Within Tolerance

Sample ID	Business Name	NPK Guarantee	Lab Result N	Lab Result P	Lab Result K	Micronutrients	Sample Status
1-083022- 10	Bourdeau Brothers - Sheldon	10-20-20	8.29	19.4	20.15	Pass	Fail
1-083022- 11	Bourdeau Brothers - Sheldon	19-19-19	17.26	18.3	22.5		Fail
1-083022- 12	Bourdeau Brothers - Sheldon	28-0-15	26.41	0	13.5		Fail
1-083022- 13	Bourdeau Brothers - Sheldon	5-15-30	5.5	15.1	30		Pass
1-083022- 14	Bourdeau Brothers - Sheldon	6-12-12	8.24	11.15	12.1		Within Tolerance
1-083022- 15	Bourdeau Brothers - Sheldon	24-12-18	22.07	11.8	18.8		Fail
1-083022- 17	Bourdeau Brothers - Sheldon	24-12-18	25.68	14.3	14.15		Fail
452214	Northeast Agricultural Sales Inc	10-20-20	11.31	20.2	16.4		Fail
452215	Northeast Agricultural Sales Inc	6-24-24	8.58	19.95	23.6		Fail

Sample	Business	NPK	Lab	Lab	Lab	Micronutrients	Sample
ID	Name	Guarantee	Result	Result	Result		Status
			N	P	K		
452216	Northeast	19-19-19	19.15	19.5	18		Within
	Agricultural						Tolerance
	Sales Inc						
452217	Northeast	5-10-10	5.68	8.55	9.46		Fail
	Agricultural						
	Sales Inc						
452218	Northeast	34-0-10	30.8	0	12.45		Fail
	Agricultural						
	Sales Inc						
452219	Northeast	0-20-20	0	17.6	21.6		Fail
	Agricultural						
	Sales Inc						
222009	General	2-45-28	3.71	51.3	23.75	Fail	Fail
	Hydroponics						
222010	General	7-4-10	5.7	5.32	7.57	Pass	Fail
	Hydroponics						
222011	Down to	7-7-2	7.55	9.12	2.44	Pass	Pass
	Earth						
	Distributors						
	Inc						
222012	General	10-12-22	9.86	13.2	21.1	Pass	Within
	Hydroponics						Tolerance
222013	General	0-5-4	0	6.24	3.77	Pass	Within
	Hydroponics						Tolerance
222014	Botanicare	3-2-4	2.9	2.33	4.31	Pass	Within
							Tolerance
222015	Canna	0-10-11	0	10.9	12		Pass
	Continental						
222016	Coast Of	2-3-0	1.79	2.47	0		Within
	Maine						Tolerance
	Organic						
	Products						
222018	Advanced	2-4-8	2.39	4.46	9.51	Pass	Pass
	Nutrients						
452220	Northeast	10-10-10	10.94	10.1	10.2		Pass
	Agricultural						
	Sales Inc						
12-	Northeast	40-0-0	41.40	.00	.00	Fail	Within
041122-	Agricultural						Tolerance
01	Sales Inc						

Sample	Business	NPK	Lab	Lab	Lab	Micronutrients	Sample
ID	Name	Guarantee	Result	Result	Result		Status
			N	P	K		
12-	North	5-3-4	4.56	3.87	3.55		Within
041122-	Country						Tolerance
02	Organics						
12-	North	4-6-4	3.91	10.20	3.68		Within
041122-	Country						Tolerance
03	Organics						
12-	North	8-1-9	6.83	1.71	7.41		Fail
041122-	Country						
04	Organics						
12-	North	6-0-6	3.84	.00	7.09		Fail
041122-	Country						
05	Organics						
12-	Northeast	40-0-0	39.20	.00	.00	Pass	Within
041222-	Agricultural						Tolerance
01	Sales Inc						
12-	Lawes	39-8-0-0	35.45	.00	.00	Pass	Fail
041822-	Agricultural						
01	Service Inc						
12-	Lawes	0-0-60	.00	.00	60.90		Pass
041822-	Agricultural						
02	Service Inc						
12-	Bourdeau	39-0-0	39.40	.00	.00	Fail	Pass
050322-	Brothers of						
01	Middlebury						
12-	Bourdeau	46-0-0	45.30	.00	.00		Within
050322-	Brothers of						Tolerance
02	Middlebury						
12-	Bourdeau	23-0-30	23.50	.01	29.30		Within
050322-	Brothers of						Tolerance
03	Middlebury						
12-	Bourdeau	10-13-27	10.90	15.40	28.30	Fail	Pass
051322-	Brothers of						
01	Middlebury						
12-	Bourdeau	22-38-0	21.20	37.40	.00		Within
051322-	Brothers of						Tolerance
02	Middlebury						
12-	Bourdeau	7-0-45	7.51	.00	43.80	Pass	Within
051322-	Brothers of						Tolerance
03	Middlebury						
12-	Bourdeau	10-13-27	10.00	14.00	27.00	Pass	Within
051322-	Brothers of						Tolerance
04	Middlebury						

Sample	Business	NPK	Lab	Lab	Lab	Micronutrients	Sample
ID	Name	Guarantee	Result	Result	Result		Status
			N	P	K		
12-	Lawes	19-19-19	19.60	19.90	18.10		Within
051622-	Agricultural						Tolerance
01	Service Inc						
12-	Lawes	5-10-10	8.09	13.30	13.65		Pass
051622-	Agricultural						
02	Service Inc						
12-	Lawes	15-15-15	12.45	18.70	14.30		Fail
051622-	Agricultural						
03	Service Inc						
12-	Lawes	10-20-10	11.60	19.30	12.30		Within
051622-	Agricultural						Tolerance
04	Service Inc						
12-	Lawes	26-6-21	22.05	7.63	23.45		Fail
051622-	Agricultural						
05	Service Inc						
12-	Lawes	13-13-13	13.40	11.67	14.73		Fail
051622-	Agricultural						
06	Service Inc						
12-	Lawes	46-0-0	44.94	.00	.00		Within
051622-	Agricultural						Tolerance
07	Service Inc						
12-	Lawes	19-19-19	21.40	18.80	16.93		Fail
051622-	Agricultural						
08	Service Inc						
452201	Northeast	30-0-20	31.70	.00	18.90		Within
	Agricultural						Tolerance
	Sales Inc						
452202	Northeast	15-10-22	14.70	9.15	22.60	Pass	Within
	Agricultural						Tolerance
	Sales Inc						
452203	Northeast	15-10-28	15.00	11.00	27.20	Pass	Within
	Agricultural						Tolerance
	Sales Inc						
452204	Northeast	20-10-20	18.63	10.60	21.50	Pass	Fail
	Agricultural						
	Sales Inc						
452205	Northeast	42.5-0-0	43.80	.00	.00	Fail	Pass
	Agricultural						
	Sales Inc						
452206	Northeast	15-15-15	13.11	14.25	16.80		Fail
	Agricultural						
	Sales Inc						

Sample	Business	NPK	Lab	Lab	Lab	Micronutrients	Sample
ID	Name	Guarantee	Result	Result	Result		Status
			N	P	K		
452207	Northeast	20-6-10	17.35	6.44	9.99		Fail
	Agricultural						
	Sales Inc						
452208	Yara Canada	46-0-0	46.70	.00	.00		Pass
	Inc						
452209	Northeast	10-10-10	9.35	10.70	11.40		Within
	Agricultural						Tolerance
	Sales Inc						
452210	Northeast	15-13-20	14.60	13.70	20.70	Pass	Within
	Agricultural						Tolerance
	Sales Inc						
452211	Northeast	24-6-12	23.50	5.24	13.20		Within
	Agricultural						Tolerance
	Sales Inc						
452212	Northeast	30-0-0	28.45	.00	.00	Pass	Fail
	Agricultural						
	Sales Inc						
12-	Carovail	17-17-0	17.13	15.20	.00	Pass	Fail
052722-							
01							
12-	Connecticut	10-10-10	10.18	10.20	11.10		Pass
062722-	River Ag						
02	Services						
12-0627-	Connecticut	19-19-19	20.18	15.85	20.65		Fail
03	River Ag						
	Services						
12-	Connecticut	5-10-10	4.96	9.47	9.90		Within
062722-	River Ag						Tolerance
04	Services					_	
12-	Carovail	2-0-33	2.56	.00	32.00	Pass	Within
062722-							Tolerance
01		10.0.0	40	0.1	4.0		5
452213	Agroplasma	13-2-2	.48	.01	.10		Fail
202001	Inc	0.0.0	2 0 1	0.15	2.2.		*****
222001	Agrothrive	3-3-2	2.81	3.12	2.24		Within
22222	Inc	20027	2.12	6.00	4.3.1		Tolerance
222002	United	38025	3.43	6.88	4.24		Fail
	Compost &						
	Organics Dba						
222002	Fox Farm	7.10.7		0.20			*****
222003	Bonide	7-10-7	6.75	9.28	6.75		Within
	Products LLC						Tolerance

Sample ID	Business Name	NPK Guarantee	Lab Result	Lab Result	Lab Result	Micronutrients	Sample Status
ID	Name	Guarantee	N	P	Kesuit		Status
222004	Ocean Crest Seafoods Inc	2-4-1	2.13	4.40	.23		Fail
222005	Scotts Company	15-9-12	15.47	9.01	12.00	Pass	Pass
222006	Knox Fertilizer Company Inc	10-15-10	9.94	15.40	10.30		Within Tolerance
222007	Dr Earth	1-1-1	2.48	1.87	1.33		Pass
222008	Jr Peters Inc	20-20-20	20.47	21.00	22.60		Pass
1-083022- 16	Bourdeau Brothers - Sheldon	25-4-14	25.1	5.98	13		Within Tolerance
222017	Upper Valley GrowPro,LLC DBA White River GrowPro	0-6-0	0.00	5.23	0.00		Within Tolerance
1-091422-	Green	5-10-5	5.49	9.46	6.38		Within
01	Mountain Fertilizer Div LD Oliver						Tolerance
1-091422- 02	Green Mountain Fertilizer Div LD Oliver	5-10-10	4.19	9.16	6.65		Fail
1-091422- 03	Green Mountain Fertilizer Div LD Oliver	10-10-10	8.3	8.79	9.39		Fail
1-091422- 04	Green Mountain Fertilizer Div LD Oliver	5-10-10	4.48	9.3	9.44		Within Tolerance
1-091422- 05	Green Mountain Fertilizer Div LD Oliver	6-16-12	9.07	13.35	11.9		Fail
1-091422- 06	Green Mountain Fertilizer Div LD Oliver	20-0-12	22.22	0	14.2		Pass

Sample	Business	NPK	Lab	Lab	Lab	Micronutrients	Sample
ID	Name	Guarantee	Result	Result	Result		Status
1-091422-	Green	19-19-19	N 19.34	P 19.9	K 18.2		Within
07	Mountain	19-19-19	19.34	19.9	18.2		Tolerance
07	Fertilizer Div						Tolerance
1.001.122	LD Oliver	10.20.10	12.06	22.2	10.00		D
1-091422-	Green	10-20-10	12.96	23.3	10.00		Pass
08	Mountain						
	Fertilizer Div						
	LD Oliver						
1-091422-	Green	5-15-30	5.39	10.8	30.2		Fail
09	Mountain						
	Fertilizer Div						
	LD Oliver						
1-091422-	Green	15-10-15	15.49	11.4	14.2		Within
10	Mountain						Tolerance
	Fertilizer Div						
	LD Oliver						
1-091422-	Green	8-16-16	7.42	14.2	16.1		Fail
11	Mountain						
	Fertilizer Div						
	LD Oliver						
1-091422-	Green	20-0-12	17.29	0	13.6		Fail
12	Mountain						
	Fertilizer Div						
	LD Oliver						
1-091422-	Green	6-16-12	5.93	8.65	8.74		Fail
13	Mountain						
	Fertilizer Div						
	LD Oliver						
1-091422-	Green	6-0-12	6.47	0	10.33	Pass	Fail
14	Mountain						
	Fertilizer Div						
	LD Oliver						
1-091422-	Green	23-12-18	28.83	12.4	10.45		Fail
15	Mountain						
	Fertilizer Div						
	LD Oliver						
1-091422-	Green	46-0-0	44.91	0	0		Within
16	Mountain						Tolerance
	Fertilizer Div						
	LD Oliver						

Sample	Business	NPK	Lab	Lab	Lab	Micronutrients	Sample
ID	Name	Guarantee	Result	Result	Result		Status
			N	P	K		
1-091422-	Green	15-8-12	18.37	7.58	11.40		Within
17	Mountain						Tolerance
	Fertilizer Div						
	LD Oliver						
1-091422-	Green	10-0-10	4.52	0	8.55		Fail
18	Mountain						
	Fertilizer Div						
	LD Oliver						
1-091422-	Green	13-13-13	12.97	9.25	12.90		Fail
19	Mountain						
	Fertilizer Div						
	LD Oliver						
1-091422-	Green	6-5-11	7.48	4.25	10.20		Within
20	Mountain						Tolerance
	Fertilizer Div						
	LD Oliver						
12-	Winfield	24-0-4	23.80	0	3.88		Within
100522-	Solutions						Tolerance
01	LLC						