

CONNECTICUT AGRICULTURAL EXPERIMENT STATION.

Bulletin 39.—April 10, 1880.

FERTILIZER ANALYSES.

357. Refuse Salt Washings.
 358. Kiln Refuse.
 359. No. 2 Fine Salt.

The above were sampled by the Secretary of the Onondaga Salt Association at Syracuse, N. Y., and were sent to the Station March 1, by S. A. Smith, Esq., of Cheshire.

ANALYSES.

357. 358. 359.

Chloride of Sodium, (salt).....	67.43	97.20	98.20
Chloride of potassium, (muriate of Potash)		.54	.54
Sulphates and Carbonate of Lime and Magnesia.....	20.18	2.69	.37
Moisture.....	2.30	.37	.39
	100.00	100.00	100.00

Cost delivered on cars at Cheshire, in lots of 10 and 20 tons \$4.67 and \$6.67 per ton and \$1.32 per bbl. respectively.

The samples having been sent in paper boxes contained less moisture when received than when put up. The following analyses published by the Salt Association show what proportions of moisture are contained in the fresh article. These figures are probably an average, the refuse being naturally somewhat variable in composition.

Refuse Salt Washings. Kiln Refuse.

Chloride of Sodium.....	50	70
Sulphate of Lime.....	15	12
Carbonate of Lime and Magnesia.....	8	5
Insoluble Matter.....	4	2
Moisture.....	17	6
Organic Matter.....	3	2
	100	100

Mr. Smith was desirous of knowing how much potash the sample contained. The amount is too small to be worth considering. The commercial value of these articles is evidently the price put upon them by the manufacturers, there being no competition in this class of

goods in our market. The fertilizing value is only to be determined by experiment. On some soils, salt (like gypsum on many soils) produces a good effect, not commonly by directly nourishing crops, but by its solvent action whereby it disengages plant food from the minerals of the soil.

363 Stockbridge Onion Fertilizer made by Bowker Fertilizer Co. Sampled and sent by Hubbell & Wakeman, Saugatuck, March 2, Dry Fish Guano.

- 372 Fish and Potash.
 373 Quinnipiac Fertilizer Co.'s Phosphate.
 374

The above were made by the Quinnipiac Fertilizer Co., now of New London, and were sampled and sent to the Station March 22, by Robert B. Bradley, New Haven.

ANALYSES.

363 372 373 374

Organic Nitro.....	5.10	8.54	4.20	3.32
Soluble Phos. acid.....	4.85		1.44	1.20
Reverted " acid.....	.51	7.50	3.07	7.00
Insoluble Phos. acid.....	.45		.37	3.32
Potash.....	7.94		4.95	3.77
Chlorine.....	2.68		6.5	1.62
Estimated value per ton.....	\$37.84	\$44.32	\$22.05	\$40.28
Cost per ton.....	\$56.60	\$45.30	\$16.00	\$28.00

Potash is valued in 363 at 7 1-2 cents; in 373 at 6 cents; and in 374 at 4 1-2 cents.

CONCRETES.—In Bulletin 31, and in Station Report for 1879, p. 25. The Quinnipiac Co.'s Pine Island Guano was valued at \$33.57 per ton, the potash being reckoned as muriate. I am informed that the potash used was high grade sulphate. This would properly raise the valuation by \$3.98, making the ton value \$37.55. The cost was \$38. The Pine Island Guano contained enough chlorine to make muriate of its potash, hence the conclusion that muriate was used.

S. W. JOHNSON, Director.