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THE CONNECTICUT FERTILIZER LAW.

The General Assembly at its Session in 1893 passed an act, Chapter CLXXII, amending the fertilizer law previously in force in Connecticut.

The attention of all concerned is called to the following copy of the General Statutes of the State regarding fertilizers which embodies the amendments and is the law now in force.

Copies of the law may be had on application to the Station. Attention is specially called to the following requirements.

1. In case of *all* fertilizers or manures, except stable manure and the products of local manufacturers of less value than ten dollars a ton, the law holds the SELLER responsible for *affixing a correct label or statement* to every package or lot sold or offered, as well as for the *payment of an analysis fee* of ten dollars for each fertilizing ingredient which the fertilizer contains or is claimed to contain, *unless* the MANUFACTURER OR IMPORTER shall have provided labels or statements and shall have paid the fee. Sections 4005 and 4007.

The Station understands "the fertilizing ingredients" to be those whose determination in an analysis is necessary for a valuation, viz: Nitrogen, Phosphoric acid and Potash. The analysis-fees in case of any fertilizer will therefore be ten, twenty or thirty dollars, according as one, two or three of these ingredients are contained or claimed to exist in the fertilizer.

2. The law also requires, *in the case of every commercial fertilizer*, that a *sealed sample* shall be deposited with the Director of the Station by the MANUFACTURER OR IMPORTER, and that a *certified statement* of composition, etc., shall be filed with him, Section 4006.

A statement of the per cent. of Nitrogen, Phosphoric acid (P_2O_5) and Potash (K_2O), and of their several states or forms, will suffice in most cases. Other ingredients may be named if desired.

In all cases the per cent. of *nitrogen* must be stated. Ammonia may also be given when actually present in ammonia salts, and "ammonia equivalent to nitrogen" may likewise be stated.

The per cent. of soluble and reverted phosphoric acid may be given separately or together, and the term "available" may be used in addition to, but not instead of, soluble and reverted.

The percentage of insoluble phosphoric acid may be stated or omitted.

In case of Bone, Fish, Tankage, Dried Meat, Dried Blood, etc., the chemical composition may take account of the two ingredients: Nitrogen, Phosphoric Acid.

For Potash Salts give always the per cent. of Potash (potassium oxide): that of Sulphate of Potash or Muriate of Potash may also be stated.

The chemical composition of other fertilizers may be given as found in the Station Reports.

3. It is also provided that EVERY PERSON in the State, who sells *any commercial fertilizer of whatever kind or price*, shall annually report certain facts to the Director of the Experiment Station, and on demand of the latter shall deliver a sample for analysis. Section 4008.

4. All "CHEMICALS" that are applied to land, such as: Muriate of Potash, Kainite, Sulphate of Potash and Magnesia, Sulphate of Lime (Gypsum or Land Plaster), Sulphate of Ammonia, Nitrate of Potash, Nitrate of Soda, etc.—are considered to come under the law as "Commercial Fertilizers." Dealers in these chemicals must see that packages are suitably labeled. They must also report them to the Station, and see that the analysis fees are duly paid, in order that the Director may be able to discharge his duty as prescribed in Section 4013 of the Act.

It will be noticed that the State exacts no license tax either for making or dealing in fertilizers. For the safety of consumers and the benefit of honest manufacturers and dealers, the State requires that it be known what is offered for sale, and whether fertilizers are what they purport to be. With this object in view the law provides, in Section 4013, that all fertilizers be analyzed and it requires the parties making or selling them to pay for these analyses in part: the State itself paying in part by maintaining the Experiment Station.

ACTS CONCERNING COMMERCIAL FERTILIZERS.

Chapter CCLIII of the General Statutes of Connecticut as amended by Chapter CLXXII of the Acts of the General Assembly, Session of 1893.

SECTION 4005. Every person or company who shall sell, offer, or expose for sale, in this State, any commercial fertilizer or manure except stable manure and the products of local manufacturers of less value than ten dollars a ton, shall affix conspicuously to every package thereof a plainly printed statement clearly and truly

Printed Statement to be affixed to all packages and to go with all lots.

certifying the number of net pounds of fertilizer in the package, the name, brand, or trade-mark under which the fertilizer is sold, the name and address of the manufacturer, the place of manufacture and the chemical composition of the fertilizer, expressed in the terms and manner approved and usually employed by the Connecticut Agricultural Experiment Station.

If any such fertilizer be sold in bulk, such printed statement shall accompany every lot and parcel sold, offered, or exposed for sale.

Before sale certified copies of statement and sealed sample to be deposited with director.

SEC. 4006. Before any commercial fertilizer is sold, offered, or exposed for sale, the manufacturer, importer, or person who causes it to be sold, or offered for sale, within this state shall file with the director of the Connecticut Agricultural Experiment Station two certified copies of the statement prescribed in section 4005, and shall deposit with said director a sealed glass jar or bottle containing not less than one pound of the fertilizer, accompanied by an affidavit that it is a fair average sample thereof.

Analysis fee to be paid annually on or before May 1.

SEC. 4007. The manufacturer, importer, agent, or seller of any commercial fertilizer shall pay on or before May 1, annually, to the director of the Connecticut Agricultural Experiment Station, an analysis fee of ten dollars for each of the fertilizing ingredients contained or claimed to exist in said fertilizer: *provided*, that when the manufacturer or importer shall have paid the fee herein required for any person acting as agent or seller for such manufacturer or importer, such agent or seller shall not be required to pay the fee prescribed in this section.

Yearly report to Station of dealers or agents

SEC. 4008. Every person in this State who sells, or acts as local agent for the sale of any commercial fertilizer of whatever kind or price, shall annually, or at the time of becoming such seller or agent, report to the director of the Connecticut Agricultural Experiment Station his name, residence, and post-office address, and the name and brand of said fertilizer, with the name and address of the manufacturer, importer, or party from whom such fertilizer was obtained, and shall, on demand of the director of the Connecticut Agricultural Experiment Station, deliver to said director a sample suitable for analysis of any such fertilizer or manure then and there sold or offered for sale by said seller or agent.

Leather.

SEC. 4009. No person or party shall sell, offer, or expose for sale, in this state any pulverized leather, raw, steamed, roasted,

or in any form, as a fertilizer or as an ingredient of any fertilizer or manure, without explicit printed certificate of the fact, such certificate to be conspicuously affixed to every package of such fertilizer or manure, and to accompany every parcel or lot of the same.

Fish guano, etc.

SEC. 4010. Every manufacturer of fish guano, or fertilizers of which the principal ingredient is fish or fish-mass from which the oil has been extracted, shall, before manufacturing or heating the same, and within thirty-six hours from the time such fish or mass has been delivered to him, treat the same with sulphuric acid or other chemical, approved by the director of said experiment station, in such quantity as to arrest decomposition: *provided, however*, that in lieu of such treatment such manufacturers may provide a means for consuming all smoke and vapors arising from such fertilizers during the process of manufacture.

Penalties.

SEC. 4011. Any person violating any provision of the foregoing sections of this chapter shall be fined one hundred dollars for the first offense, and two hundred dollars for each subsequent violation.

Fertilizers for private use.

SEC. 4012. This chapter shall not affect parties manufacturing, importing, or purchasing fertilizer for their own private use, and not to sell in this State.

Director's duties and authority.

SEC. 4013. The director of the Connecticut Agricultural Experiment Station shall pay the analysis-fees received by him into the treasury of the station, and shall cause one or more analyses of each fertilizer to be made and published annually. Said director is hereby authorized, in person or by deputy, to take samples for analysis from any lot or package of manure or fertilizer which may be in the possession of any dealer.

Bulletins.

SEC. 4014. The director of the Connecticut Agricultural Experiment Station shall, from time to time, as bulletins of said station may be issued, mail or cause to be mailed two copies, at least, of such bulletins to each post-office in the State.

COTTON SEED MEAL AS A FERTILIZER AND FEED.

The following analyses of Cotton Seed Meal have been made at this Station during the present year.

While they were made in the interest of those who were buying the meal to use as a fertilizer, they are worth the attention also of those who are now using or who intend during the winter season, to use Cotton Seed Meal as feed for stock.

The eight analyses which have the first place in the table represent decorticated meal of fair quality made from upland cotton.

The per cent. of nitrogen found in No. **3781** is higher than has ever been observed in any sample analyzed here, 8.08 per cent.

The per cent of nitrogen found in No. **3832** is very low for pure meal, but the sample does not appear to be adulterated. The other differences in nitrogen, among these eight samples, are such as occur constantly and are due to differences of soil and fertilizers on which the cotton was raised and to differences in the thoroughness of the hulling.

Owing to increased foreign demand the price of cotton seed meal has advanced sharply so that it is no more our cheapest source of available nitrogen. Thus the average cost of nitrogen in these eight samples, analyzed in 1893 was 17½ cents per pound.

Last year the average cost was only about 15 cents, nevertheless meal of prime quality is still a profitable fertilizer to use if bought at $30 or even $31 per ton.

Special attention is called to the three samples, **3833, 3827** and **3856.** They contain somewhat more than half as much nitrogen and considerably less phosphoric acid and potash than the other samples, but were sold for only a dollar or two less per ton.

These are "Cotton Seed Meal" as well as the other but are made from the Seed of Sea Island Cotton *ground with the hulls.* They are readily distinguished by their dark color and the presence of hard black fragments of hulls.

As fertilizers they are not worth more than $18.00 per ton when bright decorticated meal can be bought for $30.00.

It is quite likely that this sort of meal will be put on our market more commonly than heretofore.

In ordering Meal to use as a Feed or as a Fertilizer, purchasers should require Decorticated, Upland Cotton Seed Meal containing at

least 6.5 per cent. of Nitrogen, unless they are willing to use the other, greatly inferior meal, which cannot be economically done unless it can be got for a greatly reduced price.

There is no evidence that the undecorticated meal is in any way injurious to stock; indeed some feeders prefer it to the clear decorticated meal on the ground that it is less likely to cloy cattle if fed in large quantity.

But both its manurial and its feed value are much less than those of decorticated meal.

Description of Samples.

3848. Sold by A. H. Rice, Granby. Sampled by H. A. Sheldon, West Suffield.

4025. Sold by Olds & Whipple, Hartford, in the fall of 1892. Sampled by Eugene Brown, Poquonock.

3781. Bought at the south by A. Pouleur, Windsor, and sampled by him.

3881. Sold by Olds & Whipple. Sampled by Station Agent from stock of J. A. DuBon.

3858. Sold by Olds & Whipple, Hartford, in spring of 1893. Sampled by Eugene Brown, Poquonock.

3861. Sold by Edward Austin, Suffield. Sampled by O. E. Pitcher, Enfield.

3924. Sold by C. H. Dexter & Sons, Windsor Locks. Sampled by Eugene Brown and T. B. Hathaway from stock sold to several purchasers.

3832. Sold by J. H. Viets, Copper Hill. Sampled by S. D. Viets.

3833. Sold by J. H. Viets. Sampled by S. D. Viets.

3827. Sold by C. H. Dexter & Sons, Windsor Locks. Sampled by Eugene Brown, Poquonock.

3856. Sold by E. S. Hough, Poquonock. Sampled by Eugene Brown, Poquonock.

3941. Sold by Horace Griffin, East Granby. Sampled by B. L. Alderman, West Suffield.

3943. Sold by J. H. Viets, Copper Hill. Sampled by S. D. Viets.

Analyses of Cotton Seed Meal.

	3848	4025	3781	3881	3858	3861	3924	3832	3833	3827	3856	3941	3943
Nitrogen	6.90	7.01	8.08	6.74	6.76	6.64	6.65	6.10	4.49	3.97	3.71	7.01	6.86
Phosphoric acid	3.31	3.28	2.65	3.04	3.04	3.29	3.43	3.15	1.83	1.75	1.66	---	---
Potash	1.99	1.97	1.78	1.94	1.87	1.89	2.06	1.95	1.67	1.36	1.39	---	---
Cost per ton	$26.00	27.00	30.00	27.00	30.00	30.00	31.00	30.00	28.00	29.00	29.50		
Nitrogen costs cents per pound,	14.9	15.4	15.7	16.2	18.4	18.5	19.0	20.2	27.1	32.4	35.4		