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PROVISIONS OF THE NEW FERTILIZER LAW OF NEW YORK.

BY L. L. VAN SLYKE.

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The Bulletins published by the Station will be sent free to any farmer applying for them.

*Connected with Long Island Branch Station.
†Connected with Fertilizer Control.
Summary.

I. History of Fertilizer Legislation. In 1878 the first law was passed to regulate the sale of fertilizers, but no provisions were made for its execution. Another law was passed in 1890 and amended in 1894 but was so full of technical defects as to defeat all attempts at making prosecutions for violations. The present law became operative May 28th, 1896.

II. Application of New Law. The present fertilizer law applies to "any commercial fertilizer or any material to be used as a fertilizer, the selling price of which exceeds ten dollars per ton," when such goods are sold, offered or exposed for sale in this state.

III. Statement Required on Packages. The new fertilizer law requires that there shall be printed on or affixed to each package of fertilizer, in a conspicuous place on the outside of the package, a plainly printed statement certifying,

1. The net weight;
2. The name, brand or trade-mark;
3. The name and address of the manufacturer;
4. The chemical composition expressed as follows:
   (a) Per cent. of nitrogen.
   (b) Per cent. of available phosphoric acid, or, in case of undissolved bone, total phosphoric acid.
(c) Per cent. of potash soluble in distilled water.

IV. Filing of Statements. Before any fertilizer can be legally sold, offered or exposed for sale in this state, the manufacturer or agent must file with the New York Agricultural Experiment Station at Geneva a statement like that provided for on packages, and also an additional statement in January of every year.

V. When fertilizers contain leather or similar inert products, the fact must be explicitly and conspicuously stated on each package.

VI. Statement of Work Accomplished. Since July, 1890, there have been collected and analyzed by this Station over 2700 samples of commercial fertilizers, manufactured by over 120 different firms. During this time eleven million pages of printed matter have been distributed among farmers in the form of bulletins.
I. HISTORY OF LEGISLATION ABOUT FERTILIZERS IN NEW YORK STATE.

In 1878 the first attempt was made by legislative enactment to afford protection against fraud to purchasers of commercial fertilizers. The law proved a failure, because no provisions were made for its execution. After occasional agitation of the subject for ten years, a systematic effort was made to secure a new law which should be a practical measure. Work done at this Station brought to light the existence of serious frauds and aroused a new and strong interest in the matter. Finally, in 1890 a law was passed, the execution of which was placed in charge of the Agricultural Experiment Station at Geneva. Efforts to enforce the provisions of this statute revealed exceeding looseness in its language and other serious defects. The general principles embraced in the act were satisfactory to both consumers and manufacturers but, in its practical working, it was found difficult to carry through prosecutions against offending parties. The first prosecution begun under the enactment of 1890 was successful in the lower court but, on appeal to the supreme court, the decision of the lower court was reversed on account of certain technical defects in the statute. An effort was made to remedy these defects by amendments which became operative May 9, 1894. Again proceedings were instituted against violators of the law, but only to show that the statute was practically useless so far as it caused offenders to be punished by legal process. So serious were the defects of the enactment of 1890 that it was decided to secure the passage of a new law. A new law was prepared by a committee appointed by the Board of Control of this Station co-operating with the acting director, who had had practical charge of the execu-
tion of the old law. In framing the new act, advantage was taken of the experience gained in trying to enforce the old statute.

After receiving the most careful attention in every phase of its preparation, the new law was introduced in the assembly on February 27, 1896, by Hon. M. V. B. Ives and was in due time passed by both branches of the legislature. It received the signature of Governor Morton and thus became a law on May 28.

In order that manufacturers and consumers of fertilizers may fully understand the provisions of the new fertilizer law at the earliest practicable moment, we give below a copy of the law with such explanations of special points as may make its provisions understood beyond reasonable doubt.

II. THE NEW FERTILIZER LAW OF NEW YORK.

Chap. 955.

Approved by the Governor May 28th, 1896. Passed, three fifths being present.

An Act

For the protection and education of farmers and manufacturers in the purchase and sale of fertilizers.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Every person who shall sell, offer or expose for sale in this state any commercial fertilizer or any material to be used as a fertilizer, the selling price of which exceeds ten dollars per ton, shall stamp on or affix to each package of such fertilizer, in a conspicuous place on the outside thereof, a plainly printed statement which shall certify as follows:

1. The number of net pounds of fertilizer in the package sold or offered for sale;

2. The name, brand or trade-mark under which the fertilizer is sold;

3. The name and address of the manufacturer of the fertilizer;
4. The chemical composition of the fertilizer expressed in the following terms:
   (a) Per centum of nitrogen;
   (b) Per centum of available phosphoric acid, or, in case of undissolved bone, the per centum of total phosphoric acid;
   (c) Per centum of potash soluble in distilled water.

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

§ 2. It shall be a violation of the provisions of this act if the statement required by section one of this act shall be false in regard to the number of net pounds of fertilizer in the package sold, offered or exposed for sale, or in the name, brand or trade-mark under which the fertilizer is sold, or in the name and address of the manufacturer of the fertilizer. It shall also be a violation of the provisions of this act if any commercial fertilizer or material to be used as a fertilizer shall contain a smaller percentage of nitrogen, phosphoric acid or potash than is certified in said statement to be contained therein, when such deficiency shall be greater than one-third of one per centum of nitrogen, or one-half of one per centum of available phosphoric acid (or one per centum of total phosphoric acid in the case of undissolved bone), or one-half of one per centum of potash soluble in distilled water.

§ 3. Before any commercial fertilizer or any material to be used as a fertilizer is sold, offered or exposed for sale in this state, the manufacturer, importer or person who causes the same to be sold, offered or exposed for sale shall file with the New York Agricultural Experiment Station at Geneva, a certified copy of the statement prescribed in section one of this act; and, in addition, such statement shall be filed thereafter annually during the month of January.

§ 4. No person shall sell, offer or expose for sale in this state leather or its products or other inert nitrogenous material in any form, as a fertilizer or as an ingredient of any fertilizer, unless an explicit printed statement of the fact shall be conspicuously affixed to every package of such fer-
tilizer, and shall accompany every parcel or lot of the same.

§ 5. Every person violating any of the provisions of this act shall forfeit and pay to the people of the state of New York the sum of one hundred dollars for every such violation.

§ 6. Every certificate, duly signed and acknowledged, of a chemist or other expert employed by the director of the New York Agricultural Experiment Station at Geneva relating to the analysis of any commercial fertilizer or material to be used as a fertilizer, shall be presumptive evidence of the facts therein stated.

§ 7. The doing of anything prohibited by this act shall be evidence of the violation of the provisions of this act relating to the thing so prohibited and the omission to do anything directed to be done shall be evidence of a violation of the provisions of this act relative to the things so directed to be done.

§ 8. The director of the New York Agricultural Experiment Station at Geneva is charged with the enforcement of the provisions of this act, and for this purpose, may employ agents, chemists and experts, and whenever he shall know or have reason to believe that any penalty has been incurred by any person for the violation of any of the provisions of this act, or that any sum has been forfeited by reason of any such violation, he shall report the said violation with a statement of the facts to the attorney general, who, pursuant to the provisions of chapter eight hundred and twenty-one of the laws of eighteen hundred and ninety-five may cause an action or proceeding to be brought in the name of the people for the recovery of the same.

§ 9. Chapter four hundred and thirty-seven of the laws of eighteen hundred and ninety and chapter six hundred and one of the laws of eighteen hundred and ninety-four are hereby repealed.

§ 10. This act shall take effect immediately.

While the provisions of the law are clearly and simply stated, we wish to make some added statements to anticipate
inquiries which are likely to arise. These additional statements we will make under the following heads:

1. To what goods the law applies.
2. What must be stated on each package of fertilizer.
3. Filing of statements.
4. Requirements regarding inert nitrogenous materials.
6. What persons are regarded as responsible parties.

1. To What Goods the Law Applies.

In the terms of the statute, its provisions apply to “any commercial fertilizer or any material to be used as a fertilizer, the selling price of which exceeds ten dollars per ton,” when such goods are sold, offered or exposed for sale in this state.

Originally the term “commercial fertilizer” applied to mixtures of fertilizing materials sold under trade names, containing nitrogen, phosphoric acid and potash. The term now has a broader application and includes materials commonly used for fertilizing purposes, whether mixed or unmixed, containing either nitrogen, phosphoric acid or potash or any combination of these three elements of plant-food.

The law also applies specifically to “any material to be used as a fertilizer.” If there were any doubt in regard to the term “commercial fertilizer” covering any forms of unmixed fertilizing materials, such materials would be comprehended under “any material to be used as a fertilizer.”

A question may arise as to the interpretation of the phrase, “to be used as a fertilizer.” The meaning of the word fertilizer in its broadest signification may be defined as any substance which, by its addition to the soil, is intended to produce a better growth of plants. But the design of those who framed the law was to use the word fertilizer in its more restricted sense, confining it to the materials and artificial mixtures put on the market under specific names, containing either nitrogen, phosphoric acid or potash or any combination of these.
The law therefore applies to all mixtures containing nitrogen, phosphoric acid or potash or any combination of these and also to all unmixed materials containing any of these elements of plant-food, when they sell for more than ten dollars per ton. So-called "specials" are also included under the law. Such materials as nitrate of soda, sulphate of ammonia, potash salts, dried blood, tankage, acid phosphate, rock phosphate, bones, etc., etc., all come under the provisions of this law, as prices stand at present.

The law does not apply to cases in which farmers go outside of New York State and purchase fertilizers for their own personal use. They assume their own risks in such cases.

2. What Must Be Stated on Each Package of Fertilizer.

The law requires that four things shall be stated on each package of fertilizer coming within the meaning of its provisions:

(1) The net weight;
(2) The name, brand or trade-mark;
(3) The name and address of the manufacturer;
(4) The chemical composition.

The law provides that the above statement shall be stamped on or affixed to each package of fertilizer, in a conspicuous place on the outside of the package and that the statement shall be plainly printed.

(i) The Net Weight.

The law does not specify any particular weight which shall be contained in packages of fertilizers. The manufacturer may make his packages of any size that pleases him, but he must guarantee to each purchaser for each package that the weight contained in the guarantee statement is contained in the packages. All goods sold, offered or exposed for sale must come up to the guarantee in weight, whether such goods have been away from the factory one month or several years. Every purchaser has a legal right to demand the full guaran-
ted weight of every individual package. This requirement holds good for all separate packages, whether the weight is a fraction of one pound or any other quantity. There has been a common practice of selling fertilizers for house plants in small packages without giving weight or analysis. This practice is a clear violation of the law.

(2) **The Name, Brand or Trade-Mark.**

The law assumes that every fertilizer coming under its provisions shall have some kind of a distinctive name or mark and that such name or mark shall appear plainly printed in connection with each package of fertilizer.

(3) **The Name and Address of the Manufacturer.**

The law plainly provides that with each package of fertilizer "the name and address of the manufacturer of the fertilizer" shall be given. Under the former fertilizer law, there were numerous instances of omission, no name or address of manufacturers being given. It is not sufficient to use the expression "manufactured for." Some doubt has arisen in regard to the interpretation of the word "manufacturer." The intention of the framers of the law was that the word did not necessarily apply to the party who did the mechanical work of mixing and sacking the goods. A party who makes his formulas and brands and hires someone else to prepare the materials is properly the manufacturer. The main object of this provision of the law is to require the name of some party to appear who shall be held responsible as manufacturer. Agents and dealers will be held responsible for handling goods, whose packages are not properly marked in this respect, when such goods are manufactured outside of the state.

(4) **The Chemical Composition.**

The law requires that the chemical composition or guarantee-statement of analysis of a fertilizer shall be expressed in the following terms:

- a. Per cent. of nitrogen;
b. Per cent. of available phosphoric acid, or, in case of undissolved bone, the per cent. of total phosphoric acid;
c. Per cent. of potash soluble in distilled water.

A. NITROGEN.

The law requires in a guarantee-statement of chemical composition that the per cent. of nitrogen as nitrogen shall be stated. The law does not forbid stating the equivalent of nitrogen in the form of ammonia in addition, but the per cent. of nitrogen as nitrogen must be given in any and every case. The indiscriminate and exclusive use of the term "ammonia" in guaranteeing nitrogen is misleading and is no longer permitted.

B. PHOSPHORIC ACID.

The law requires the per cent. of available phosphoric acid to be stated and, in case of undissolved bone, the per cent. of total phosphoric acid. There is nothing in the law to prevent the statement of reverted, soluble, insoluble and total phosphoric acid in addition to the available form; but the per cent. of available phosphoric acid must always be stated when present, except in case of undissolved bone.

The present law differs from the former law in that the former required the separate statement of both soluble and available phosphoric acid and made no provision for undissolved bone. The former law, however, did not require manufacturers to maintain their guarantee in respect to soluble phosphoric acid. It was deemed wise to have the legal requirements consistent and drop the soluble phosphoric acid from the guarantee, since this is so readily liable to change on standing. The farmer is sufficiently protected in requiring manufacturers to observe the guarantee with reference only to the available form of phosphoric acid.

In respect to bone, it is well known that the usual chemical methods used in determining available phosphoric acid do not give reliable results when applied to undissolved bone. The former law was not enforced in respect to untreated bone because it was not properly applicable, though technically no exception was made. The present law recognizes a condition
which actually exists and makes provision to cover a case which the former law did not reach.

C. Potash.

In a statement of chemical composition, the per cent. of potash (K₂O) soluble in distilled water must be given. Potash which is not thus soluble can not legally be included in the statement.

There is no provision which would prevent one expressing the equivalent of potash in the form of sulphate or muriate of potash in addition to potash; but, if only one form is given, it must be always that of potash (K₂O) soluble in distilled water. To state only the amount of sulphate of potash, or muriate of potash, or to use alone such expressions as "potash s." or "potash sul." is a clear violation of the provisions of the law.

D. Suggested Form of Statement of Guarantee-Analysis.

For the sake of uniformity and simplicity, we suggest to manufacturers of fertilizers the following form of statement of guarantee-analysis as one which will be accepted by this Station as conforming to the provisions of the law:

Nitrogen .................................................. ....per cent.
Available phosphoric acid .................................... "
(Total phosphoric acid in case of undissolved bone) ... "
Potash (K₂O) soluble in distilled water .................... "

This form is simple, is all the law requires and is sufficiently complete to give consumers an intelligent idea of the chemical composition. Whatever is added to this is very apt to prove confusing to the average farmer. When any constituent is absent from a fertilizer, that constituent can be omitted from the guarantee-statement of chemical composition. Thus, if a fertilizer contains no nitrogen, it is not necessary to state that no nitrogen is present; the nitrogen is simply dropped from the statement.

E. Fixed Figures in Statement of Composition.

In the interest of clearness and simplicity, we suggest that manufacturers give only the one figure representing the lower
limit of guarantee instead of stating an upper and lower limit. Several manufacturers have voluntarily adopted this system already. In our publications of guarantee-analyses, we state only the lower limit, because this is the only figure officially recognized by us as representing the guarantee.

3. Filing of Statements.

The present fertilizer law provides that the statements called for by its first section shall be filed with the New York Agricultural Experiment Station at Geneva before any fertilizer can be sold, offered or exposed for sale. After this first statement is filed, such statement shall be filed after that annually during the month of January. The former law provided only for filing statements during the first twenty days of July each year. Under the provisions of the new law either the manufacturer or importer or person who causes the goods to be sold files the statement. When any manufacturer residing outside of the state fails to comply with the law in this respect, then every individual handling such manufacturer's goods in the state must file such statement or render himself liable to prosecution. Non-resident manufacturers will therefore always find it to their advantage to comply with the law promptly and protect their local agents.

It is to be observed that the statement is not to be filed merely once, but not less often than once every year.

*This requirement applies to special goods* as well as to others.

4. Requirements Regarding Inert Nitrogenous Materials.

Section 4 reads as follows: "No person shall sell, offer or expose for sale in this state leather or its products or other inert nitrogenous material in any form, as a fertilizer or as an ingredient of any fertilizer, unless an explicit printed statement of the fact shall be conspicuously affixed to every package of such fertilizer, and shall accompany every parcel or lot of the same."
5. What Constitutes Violation of the Law.

It is a violation of the New York Fertilizer Law—
(1st) To omit the net weight on packages or to place upon packages a number falsely representing the net weight;
(2nd) To omit upon packages the name, brand or trademark under which the fertilizer is sold;
(3rd) To omit or give falsely upon the packages the name and address of the manufacturer of the fertilizer;
(4th) To give on packages an amount of nitrogen greater than the fertilizer contains, when such difference exceeds one-third of one per cent.;
(5th) To give on packages an amount of available phosphoric acid greater than the fertilizer contains, when such difference exceeds one-half of one per cent. (or one per cent. of total phosphoric acid in the case of undissolved bone);
(6th) To give on packages an amount of potash soluble in distilled water greater than the fertilizer contains, when such difference exceeds one-half of one per cent.;
(7th) To state the amount of ammonia on packages without also stating the amount of nitrogen;
(8th) To state the amount of soluble phosphoric acid, or reverted phosphoric acid, or insoluble phosphoric acid or total phosphoric acid (except in case of undissolved bone) without also stating the amount of available phosphoric acid;
(9th) To state the amount of potash as sulphate of potash or muriate of potash or in any similar form without also stating the amount of potash ($K_2O$) soluble in distilled water;
(10th) To omit any part of required statement on each and every package of fertilizer, whether the package weighs a fraction of a pound or several hundred pounds;
(11th) To omit to file required statement with the New York Agricultural Experiment Station as often as once each year in January or before selling any fertilizers;
(12th) To omit stating on packages that fertilizers contain inert nitrogenous matter when such matter is present.

6. What Persons are Regarded as Responsible Parties.

Manufacturers residing in the state will be held directly
responsible for violations of the fertilizer law. In the case of non-resident manufacturers, the agents or sellers resident in the state will be held responsible for any violations. When residents of this state purchase goods for their own personal use from non-resident parties, they have no redress under this law for any violations on the part of the manufacturer.

III. BRIEF STATEMENT OF WORK ACCOMPLISHED.

Since July, 1890, there have been collected and analyzed about 2700 samples of commercial fertilizers. Over 120 firms are doing business in this state, nearly one-half of whom reside in other states.

Since October, 1890, there have been published 16 fertilizer bulletins containing 660 pages. These have been distributed among the farmers of the state in such numbers as to make an aggregate of 11,000,000 pages.

As a direct result of the information contained in the bulletins distributed among our farmers, there has been a very marked increase in the intelligence which farmers show in the purchase and use of fertilizers. Many farmers absolutely refuse to purchase any brand of fertilizer until they see the Station's analysis. The amount of correspondence created by inquiries on the part of farmers with reference to the purchase and use of fertilizers is very large.

The real and direct benefit coming to farmers from this line of the Station's work has been incalculable in its extent and value, for it touches a larger number than any other single line of work. When we consider that the farmers of this state are expending nearly five million dollars every year for commercial fertilizers, it can be readily appreciated how important it is that protection should be afforded them.

The provisions of the law have been explained in considerable detail, in order that farmers might more readily understand what provisions manufacturers are required to observe. Before purchasing fertilizers care should be taken to see that each package contains the required statement. It is important also for dealers to make sure that manufacturers have complied with the law in respect to filing proper statements with this Station, before they undertake to sell goods.

The attention of manufacturers, dealers and consumers is called to the provisions of this new law and their co-operation is desired in making the law effective in every way. It is hoped that the attention of the Station will be called to any violations of this law which may come under the observation of any residents of this state.