

1903.
NEW ZEALAND.

JOINT AGRICULTURAL, PASTORAL, AND STOCK COMMITTEE:
REPORT ON FERTILISERS BILL, TOGETHER WITH MINUTES OF EVIDENCE
AND APPENDIX.

(HON. MR. ORMOND, CHAIRMAN.)

Report brought up on Thursday, the 22nd October, 1903, and ordered to be printed.

ORDERS OF REFERENCE.

Extract from the Journals of the Legislative Council.

THURSDAY, THE 2ND DAY OF JULY, 1903.

Ordered, "That Standing Order No. 162 be suspended, and that a Select Committee be appointed to consider all matters pertaining to agricultural and pastoral industries and stock, with power to sit and confer with any similar Committee that may be appointed by the House of Representatives, and to agree to a joint or separate report; with power to call for persons, papers, and records: the Committee to consist of the Hon. Mr. Baldey, the Hon. Mr. Bowen, the Hon. Major Harris, the Hon. Mr. T. Kelly, the Hon. Mr. W. Kelly, the Hon. Mr. McLean, the Hon. Mr. Ormond, the Hon. Mr. A. L. Smith, the Hon. Mr. L. Walker, and the mover."—(Hon. Mr. PITT.)

Extracts from the Journals of the House of Representatives.

FRIDAY, THE 3RD DAY OF JULY, 1903.

Ordered, "That Standing Order No. 211 be suspended, and that a Committee consisting of twelve members be appointed to consider all matters pertaining to agricultural and pastoral industries and stock, with power to confer and sit together with any similar Committee which may be appointed by the Legislative Council, and to agree to a joint or separate report; the Committee to have power to call for persons, papers, and records; three to be a quorum: the Committee to consist of Mr. Buddo, Mr. Hogg, Mr. Kidd, Mr. Lawry, Mr. Lethbridge, Mr. Massey, Mr. T. Mackenzie, Mr. Rhodes, Mr. Rutherford, the Hon. Sir W. J. Steward, Mr. Symes, and the mover."—(Hon. Mr. DUNCAN.)

FRIDAY, THE 31ST DAY OF JULY, 1903.

Ordered, "That the names of Mr. Bollard and Mr. McLachlan be added to the Agricultural, Pastoral, and Stock Committee."—(Hon. Mr. DUNCAN.)

Extract from the Journals of the Legislative Council.

TUESDAY, THE 1ST DAY OF SEPTEMBER, 1903.

Ordered, "That the Fertilisers Bill be referred to the Joint Agricultural, Pastoral, and Stock Committee."—(Hon. Mr. PITT.)

REPORT.

THE Joint Agricultural, Pastoral, and Stock Committee to whom was referred the above-mentioned Bill, having taken evidence and carefully considered the whole question of fertilisers and the legislation necessary in connection with their purchase and sale, now have the honour to report to your honourable House that they recommend that the Bill be allowed to proceed subject to the amendments shown on a copy of the Bill hereto attached.

A copy of the evidence taken by your Committee accompanies this report.

Parliament Buildings, 21st October, 1903.

J. D. ORMOND, Chairman.

MINUTES OF EVIDENCE.

MONDAY, 21ST SEPTEMBER, 1903.

ROBERT DICK, examined. (No. 1.)

1. *Hon. the Chairman.*] What is your occupation?—I am manager for Messrs. Kempthorne, Prosser, and Co., in the Westfield Chemical Works.

2. The Committee understands that you have evidence you desire to give on the Fertilisers Bill?—I have. I have made a few notes on it. The first clause I take exception to is clause 3, which reads, "Every manufacturer of fertilisers shall, before offering any fertiliser for sale in New Zealand, deposit with the Secretary for Agriculture," &c. I suggest that this clause should read, "Every manufacturer or importer," &c. I think the importer should be placed on the same terms as the manufacturer in the colony. Then, paragraph (b) of that clause says you must deposit with the Secretary for Agriculture "a general description of the fertiliser, and its price." Paragraph (c) of the same clause says you must deposit "a full statement of its composition, showing the minimum percentage of the following ingredients when present, and the unit-value attached to each of them," &c. In face of the words "a full statement of its composition," paragraph (b), "a general description of the fertiliser," appears to be unnecessary. One of these is not wanted, because "a general description" should mean a full statement of its composition.

3. *Hon. Mr. Duncan.*] A general description should be given of the fertiliser?—Yes; but that is described in subclause (c). The brand will give you the purpose for which it should be used. Then, the same clause provides for the names of the ingredients being given and the unit-value attached to each of them. The names mentioned have not been in use in the agricultural community before, and are substituted for names about which the farmers are beginning to have some decent comprehension.

4. You would substitute the local names?—I want to go a little further than that. Not only is "phosphoric anhydride" no improvement on "phosphate of lime," but it is the reverse, because it admits of the importation of the lowest class of superphosphates made in England, from a phosphate known as "rodondo phosphate," which is a phosphate of iron and aluminium, this being the most easily reverted, and when reverted the least soluble phosphate known. Dipotassic phosphate is open to the same objection. The ordinary trade term, "equal to sulphate of potash," is equally definite, and gives to buyers a well-known article of commerce as a standard by which to value it. So far as farmers have any knowledge of chemical substances, they all know what "sulphate of potash" is, while none know anything about "dipotassic oxide." In addition to that subclause, there should also be "phosphate of lime, citrate soluble," because in this country a large proportion of mixed manures are made, and if you mix bonedust with superphosphate, in any proportion you like, you immediately have a change in the composition, and you cannot have that guaranteed in any percentage of soluble phosphate; but you have the soluble phosphate going into the intermediate state, and therefore it should be put under a different heading with a different valuation. Then, in clause 4 and several other clauses, the expression is used "materially differs." Now I submit that is too vague a phrase to be left in a Bill like this. It should define what is "material."

5. *Hon. the Chairman.*] You suggest that it should be defined?—Yes; I will show it to you in the Act of 1892, which I will refer to presently. Now, take clause 6, subsection (3):—"Every vendor who offers for sale any fertiliser the tag attached to which contains particulars at variance with the contents of the package, and such variance is materially to the prejudice of a purchaser, is liable, in addition to any civil remedy the purchaser may have, to a fine not exceeding twenty pounds." In the Act of 1892 you get the margin within which the manufacturer may work distinctly defined. Clause 11 of that Act says, "Should such deficiency exceed the following limits," &c. That leaves a margin within which manufacturers can work. Then, clause 6 of the Bill provides for a tag as a substitution for the simple method of guarantee. By the previous Act each purchaser of 10 cwt., at the time of purchase or not later than the delivery thereof to the purchaser, had to get an invoice-certificate. The substitution of a tag is replacing a very simple method of guarantee by a much more complicated and irksome thing, which gives no additional security. Again, clause 8 of the Bill says, "Every Inspector may at all reasonable times enter the premises of any vendor and purchase, at a reasonable price, such a sample from any package of fertiliser in the possession or under the control of the vendor as may be required for purposes of analysis"; and in subsection (4) of clause 9—and the two provisions, I think, should be taken together—it says, "A sample shall be deemed to be a fair sample if it weighs not less than four pounds, and is taken from any portion of the package at the discretion of the Inspector." I submit that no sample taken from any single package can possibly be taken as a sample of the bulk.

6. Why?—Because it would afford no test unless taken from a number of the packages. Take as an example what happened in Auckland under Mr. Pond, who, in a shipment of bonedust, declined to take as a sample anything under ten sacks taken from different portions of the whole.

7. What do you suggest?—I suggest that the sample should be taken, not from any part of a parcel, but in, say, five sacks in small lots, and in large lots 10 per cent. on the whole.

8. It would be difficult to analyse 10 per cent. of a whole shipment?—You do not analyse more than a quarter or a half ounce in the ultimate end, but it gives you a fairer and more representative sample.

9. *Hon. Mr. Duncan.*] You think that the mixture perhaps is not correct all through the quantity as a whole, and may not be accurate in a certain sample?—Yes; that is why I suggest a different sample.

10. When you come to take the samples in 10-per cent. lots, as you say, out of the shipment, you have to reduce that to a half-ounce analysis?—Yes. You take your samples over all the packages, or the heap if it is in bulk, and pass them through a riddle, and turn it over. You divide that into four, and mix two of the quarters together. You divide them again, and go on working the stuff down until you have got the quantity required for analysis to three or four pounds.

11. *Hon. the Chairman.*] Will you give the proportions of the whole?—I suggest not less than five sacks in small lots, and in large lots not less than 10 per cent. of the whole, to be the sample. With regard to clause 9, subsection (1) says, "The Inspector shall divide each such sample into three parts, and seal each part separately with an official seal." I think the vendor's seal should also be attached to each sample. It is the same as is provided in the Licensing Act. In clause 10 we have that objectionable expression coming in again, "materially differs."

12. Can you make any suggestion by which it can be altered throughout the Bill?—I suggest that it be amended in the manner set forth in clause 11 of the Act of 1892. I will take clauses 11, 12, and 13 of the Bill together. Clause 11 says, "In any proceedings under this Act the production of a certificate of the results of an analysis purporting to be signed by an analyst shall be evidence" as to identity, &c. I submit that without the production of the package in which the sample was received there could be no proof of identity. Clauses 12 and 13 of the Bill provide for proceedings being taken under the Bill. In the previous Act of 1892, after providing for dealing with samples, it says in clause 8, "The vendor or his agent may also send one of their portions of the sample as herein provided to any analyst, and should the analysis so obtained be different from that obtained by purchaser, as provided for by section six, then one or both remaining parts of samples shall be forwarded to the School of Agriculture Analyst at Lincoln, the mean of the three analyses to be accepted." This gives no chance of doing anything until the matter comes before the Court. I submit that the submission of independent analyses would very often obviate any proceedings at all, and I think in that respect the Act of 1892 is an improvement on the present Bill. Clause 15: "Every person who commits an offence against this Act for which no penalty is elsewhere prescribed is liable for the first offence to a fine not exceeding ten pounds, and for every subsequent offence to a fine not exceeding fifty pounds and not less than five pounds." I submit that that clause is a clause that should not be in any such Bill as this. If penalties are provided there should be defined offences. In every Court you find very great difficulty experienced in interpreting clauses which are much clearer than this. I submit this clause means either too much or too little.

13. *Mr. Lawry.*] What do you suggest?—I submit that it should be taken out. The Act of 1892 prescribes certain penalties, but it also prescribes the offences. Clause 16: "The Secretary for Agriculture may, from time to time, publish, in such manner as he thinks fit, the result of any analysis made under this Act." I should like that to be altered to read that the Secretary for Agriculture shall publish, in any such manner as he thinks fit, the results of all analyses. My reason for that is this: The goods I manufacture may be analysed all through the season, but if the Secretary for Agriculture only publishes what he chooses I may be judged on one analysis only, whereas if he publishes the results of all analyses—it might be found that I was giving satisfaction ninety-nine times out of a hundred—I should get a good reputation, but if only one analysis were published I might not get a good one.

14. *Hon. the Chairman.*] May he not object that, in the interests of the public, all the analyses should not be published?—There is something else to be considered besides the public.

15. *Hon. Mr. Duncan.*] The public have to rest entirely on what he represents it to be. The intention of this clause is to make the manufacturer more careful?—I am with you all the way in that desire. I am just as keen as you are to see that done.

16. The expense would be increased?—I submit that it would not add to the expense.

17. *Hon. Mr. Bowen.*] I do not see why all the analyses should not be given?—If the analyses were tabulated they would occupy but a little space.

WEDNESDAY, 30TH SEPTEMBER, 1903.

JAMES ALEXANDER POND, Colonial Analyst, examined. (No. 2.)

1. *The Chairman.*] The Committee has met, Mr. Pond, to hear your evidence on the Fertilisers Bill. I suppose the most convenient way would be for you to give such evidence as you wish on the different clauses as they come in the Bill?—Very good, Sir. The Bill I received at first is different from this one. Since I arrived here I find that considerable alterations have been made to it. As I received it at first from the Stock Department—

2. This is the Bill as it was introduced in Parliament. This is the Bill you have to give evidence on?—I would rather deal with the Bill as I received it.

3. We have no knowledge of that Bill?—Since I came down here the Stock Department have handed to me alterations they have made in the Bill. I thought I had to speak with reference to these alterations.

4. These alterations are what they are going to propose. I take it that on the evidence given the other day the Stock Department have made certain proposed alterations in this Bill, and they have let you know them in order that you may take them into consideration when you give your evidence?—In the Bill now before us there are two classes of people recognised—the vendor and the manufacturer. The Stock Department now proposes to leave out the manufacturer altogether, and leave it absolutely to the vendor. I think in that they are wise, because the manufacturers are generally at a distance, and no one out of the colony can be affected by any Act of the colony.

5. You mean that these alterations take the manufacturer out and leave the vendor only in the Bill?—Yes that is what is proposed.

6. *Mr. Massey.*] You approve of that?—Yes, I approve of that. In clause 3, subsections (b) and (c), it reads—“A general description of the fertiliser and its price; a full statement of its composition, showing the minimum percentage of the following ingredients when present, and the unit-value attached to each of them: Nitrogen soluble in water; nitrogen insoluble in water; phosphoric anhydride (anhydrous phosphoric acid) soluble in water; phosphoric anhydride insoluble in water; dipotassic oxide (potash) soluble in water.” Now the whole value of this clause will fall on the words “unit-value.” This “unit-value” was the stumbling-block in the Manures Adulteration Act of 1892. When the Hon. Mr. McKenzie brought the Bill of 1892 before the House it was framed from the best known Act we have ever had yet for the purposes of fertilisers or manure adulteration. I refer to the English Act of 1893, then under consideration in England. This Act of Mr. McKenzie's required two or three amendments to make it the most perfect Act to be obtained. Unfortunately the vendors met, and they wrecked the Bill by the addition of “unit-values.” I think, without exception, the whole of their proposed amendments went in, and by doing this they ruined the Bill. Now the “unit-value” is a very nice point for scientific chemists, but it is a very unfortunate one for the farmer. It has been my duty for years to lecture to farmers, and I do honestly say that after the years I have been lecturing they know very little more now than when we started. So long as the man is there with the blackboard it is all right, but when he is absent the knowledge is lost. The Manure Adulteration Act of 1892 which is now law is so complicated with unit-values that I think I may say it is hopelessly impossible to get a conviction unless the manure is so palpably wrong that no man would dare to put it before the people. This clause 11 of the New Zealand Manure Adulteration Act of 1892 demands that the certificate of analysis shall also state the total value of the manure sampled on the basis of the value per unit per ton published by the vendor. Then it goes on to say: “Should such deficiency exceed the following limits.” It gives the limits the deficiency may be, and it gives the vendor the opportunity of escaping. It says, “Any difference between such total value and the price charged for such manure to be allowed for by the vendor at the unit-price specified in invoice.” Now it simply requires the vendor to put the unit-values at whatever he likes. He can calculate them up and the purchaser has no possible power of recovery, as it is within the meaning as prescribed by the Act. Now the same thing applies in this Bill.

7. You are speaking about section 11 of the present Act?—Yes; the Act now in force. Now, I will give a case in point to make the thing more explicit. I have lately made an analysis for the Stock Department in Auckland, advising them as to which manures were the cheapest they could obtain on the market for their purposes. With regard to some manures of ———, they guaranteed in one instance 20 per cent. superphosphate at 4s. 6d. per unit-value. They guaranteed 18 per cent. of insoluble phosphate at 2s. per unit-value, and 3·5 per cent. of nitrogen of ammonia at 10s. per unit-value. Now, that totals £3 1s. Their selling-price is £4. Therefore, if there was a deficiency of 50 per cent., they are still within the selling-value if calculated by the unit-value they have given. Now, it is true that if this was looked into by a Magistrate conversant with chemistry he would say at once it was not right; but, as a rule, the Magistrates are not much more versed in this technical chemistry than the farmers, and you must remember that this deals with the farmers. The farmer has to consider whether he has a right to bring this before a Magistrate. Now the analysis, in this instance I have mentioned, did not come up to the guarantee. It was deficient in two points. Instead of being 20 per cent. soluble phosphate, it was 17·17; and, instead of being 18 per cent of insoluble it was 17·02. The ammonia was higher, 4·33; still its unit-value calculated was £7 14s. 6d., against £8 1s., but its selling value was £4. Therefore, the ratio would still bring it actually below the £4. Now, in the Fertilisers Bill now before us you make the chemist decide. In clause 10 of this Bill it says, “The Analyst shall give a certificate of the result of the analysis, and shall state therein explicitly the amount (if any) of the ingredients mentioned in section four hereof present in the sample analysed, and shall state in what respect (if any) the results of the analysis differ from the particulars stated on the tag attached, and whether or not such difference was materially to the prejudice of the purchaser.” Now, here you have got a unit-value without any of the conditions of those in the Act now in force; the vendor can place whatever unit-values he pleases upon it, and he will naturally make it high. Now there is one way of removing this danger. If, after the words “the unit-value attached to each of them,” you add “The value of the manure calculated from such unit-values shall be equal to its selling-price,” you nullify that danger, but you raise another one. If a value is taken of a manure, and we assume there are three different points to be considered in it, as in the instance of ——— just now quoted—that is to say of soluble phosphate, of insoluble phosphate, and of ammonia—then, with the varying percentages of these ingredients and the necessity of the unit-values combined meeting that value of £4, to be correct you have an algebraic problem of no light order. Very few vendors could do it. It requires a mathematician, and I am afraid the farming community would be hopelessly out of it. That is the difficulty. And these values fluctuate, and, as different prices are given for different quantities, it is almost impossible that the correct unit-values could be calculated. Now, I think the removal of the words “and the unit-value attached to each of them” would be wise. It would make no difference to the Analyst or the Magistrate. The inclusion of the words “and the unit-value attached to each of them” would, to my mind, simply wreck this Bill in the same way as the unit-value wrecked the last one. Now I have a few words to say upon the method of calculation. Again following the English Bill, which is, to my mind, the most complete one we have, clause 1 of the English Act says, “Every person who sells for use as a fertiliser of the soil any article manufactured in the United Kingdom, or imported from abroad, shall give to the purchaser an invoice stating the name of the article, and whether it is an artificially compounded article or not, and what is at least the percentage of the nitrogen, soluble and insoluble phosphates, and potash, if any, contained in the article, and this invoice shall have effect as a warranty by the seller of the statements contained therein.” That is very simple. Here we

have, in clause 3 of the Fertilisers Act, nitrogen soluble in water, nitrogen insoluble in water, phosphoric anhydride ("anhydrous phosphoric acid" is simply another word), phosphoric anhydride insoluble in water, and dipotassic oxide soluble in water. Now, there requires some qualifications of these. The nitrogen soluble in water is before us in the English Act, and there is only one point in connection with this which should be borne in mind. The nitrogen soluble in water deals with salts, such as sulphate of ammonia and so forth. The insoluble may be taken in two classes—that of value to the farmer, and that of very little value indeed. Take, for instance, dried blood—one of the most valuable constituents you have for the soil—and ground leather. In the latter case the chemist will find the nitrogen, but the soil will be a very long time in doing so. Now, as to the phosphoric anhydride, which is calculated in other words as phosphate of lime, the English Act requires in the certificates that it shall be put into two forms—the form of soluble tribasic phosphate of lime, or insoluble tribasic phosphate of lime. Now, it is proposed here by the Stock Department to put "phosphoric anhydride soluble in water, equal to tricalcic phosphate soluble in acid." Now, if you have the words "equal to tricalcic phosphate," it would, in my opinion, be the best. I think the less you have in an Act the better. "Phosphoric anhydride equal to tricalcic phosphate," is really all that is required.

8. *The Chairman.*] You would amend it in that way?—I would amend it in that way. Now, you come to dipotassic oxide—potash—soluble in water. It is correctly stated that it must be soluble in water, but it does not combine all that is required. There are certain salts of potash which are very valuable fertilisers. It is proposed by the Stock Department to add to this "equal to sulphate of potash." That, I think, is not sufficient. It requires in addition other salts. It should have all the salts. I would put it this way, "or the equivalent value in other potassium salts." I have already spoken as to the next subsection, subsection (2), where it deals with the manufacturer. I do not think we need consider this, because it should be set out. With regard to clauses 4 to 6, I have nothing to say excepting as regards the "tag." Now, there is a redundancy here which to my mind is a costly matter for the farmer to pay for—it is only the farmer who will pay for that. Where a brand is registered—where it is a necessity by law that every tag should be branded, and also the composition as stated appear upon it—then among a number of bags there are bound to be some found without a tag. The clause says, "every bag is to have a tag attached." It is impossible to handle these materials on board ship without in some cases the tags being torn off the bags. That some will be torn off is an absolute certainty. It does seem very hard that if such occurs by an accident over which the vendor has no control he is liable to a fine of £10, that is, in the penal clause 15—and on the second occasion to a fine of £50 and not less than £5. With regard to clause 6, an alteration is suggested by the Stock Department. The clause says: "There shall be attached by the vendor to every package of fertiliser of two hundredweight or upwards in his possession." Now, many of the manures come in 1 cwt. bags, which would escape. It is proposed by the Stock Department to alter the reading of this clause as follows: "On any sale of fertiliser of two hundredweight or upwards there shall be attached by the vendor to every package a tag," and so forth.

9. *Mr. Massey.*] You think it desirable to strike out the words "two hundredweight or upwards"?—Yes; as printed in the Act. Any way, I would advise the deletion of the tag altogether. The brand on the bag and the registration of that brand would be sufficient to control any vendor, and the less there is in the Act, so long as the Act is workable, the better. Of course, the same thing applies to section 5. Clause 7 gives the power of appointing Inspectors and Analysts. Now, the English Act does not do that. The clause with respect to this in the Act now in force is better to my mind. It is clause 16 of "The Manures Adulteration Act, 1892," and reads, "The Colonial Secretary may at his discretion issue an order authorising a County Council, for any period of time specified in such order, to appoint one or more Inspectors, who, if so directed by the County Council at any time during the period specified in such order, shall obtain samples," &c. Now, if the County Councils had been endowed with that power I think we should have had a great deal less complaint. I have received samples from some County Councils, but they have been taken indirectly from suppliers. The County Council should have had the right to appoint Inspectors. That would have saved a lot of trouble. The greatest failure of this Act lies in clause 8. It reads, "Every Inspector may at all reasonable times enter the premises of any vendor and purchase at a reasonable price such a sample from any package of fertiliser in the possession or under the control of the vendor as may be required for purposes of analysis under this Act." Now, if that were to pass into law it would mean that every Inspector could go into a place at a reasonable time, but only into the premises of the vendor, and only take his sample from any package of fertiliser. Now, if that vendor was a man who knew or doubted the material, all he would have to do would be to open his bags and run the stuff out upon the floor. The vendor could only take the sample from a package because the Act specifies so. The vendor might fill these bags again at his leisure, and put them out on the curb where they would be safe from the Inspector, and they could then go to the farmer. The latter cannot deal with it owing to the fact that he cannot take a sample under this Act. The Stock Department proposes to alter this, and make it read more in the direction of the English Act: "That the buyer of any fertiliser may, at any time within ten days after the delivery of the fertiliser, notify the Inspector, by letter addressed to him through the post, that he desires him to take a sample of such fertiliser." Now, that is almost word for word with the English Act, with this difference: that it places the Inspector in the position of the Analyst so far as taking the sample is concerned. The English Act places the matter in the hands of the Analyst; to take the sample he could depute somebody else. Following the English Act, the Stock Department suggest further on, "On payment to him of such fee as prescribed by regulation the Inspector, or some person authorised by him in writing, shall attend at the place mentioned in the notice and take a sample of the fertiliser, and shall deal with the sample as hereinbefore directed." Clause 8 of the Fertilisers Act says, "Every Inspector may . . . purchase a sample from any

package of fertiliser." Now, there is one failure there. It is proposed to add to this same clause 8 the way in which samples shall be taken, because in clause 8, as it stands, it simply says that the Inspector shall go in and take a sample from any package. There is only one package apparently, and it looks so further on—subsection (4), clause 9. So that if there were a thousand tons, and he takes it from "any package," it is not a fair test for the thousand tons. Following the English regulations, they now propose the following: "(a) A number of bags are to be selected as follows—viz., not less than two bags where the quantity does not exceed one ton, and for every additional ton an additional bag, provided that in no case need more than ten bags be sampled. (b) A sufficient quantity of the fertiliser is to be drawn from each bag so selected, and thoroughly mixed after all lumps are broken."

10. You agree with those suggestions of the Stock Department?—Yes, to a certain extent; but, so far as the details of them are concerned, I think, as in the English Act, they should be in the form of regulations. An Act cannot be altered so readily as regulations under an Act can. That is what I would like in this case—to have regulations under the Act.

11. *The Chairman.*] Have we regulations in existence now?—No. In this clause 8, as proposed by the Stock Department, there is a subsection which will nullify the Act.

12. *Mr. Massey.*] As suggested by the Stock Department?—Yes. I want to try and get the Act made as useful as I can for all purposes. I am trying to be as impartial as I can both on behalf of the vendors and the farmers. The Department says, "The sample shall be taken in the presence of the vendor or other responsible person in his employ." Now, if that becomes law, all the vendor has to do is not to be present or authorise any one. "The sample shall be taken in the presence of the vendor"—in that case the Inspector or his representative can do nothing. There is another point to be specially considered there, too. It says the sample may be taken from the bags. The English regulations require that not only shall a portion be taken from each bag, but, further, that the whole bag shall be turned out and mixed up on a wooden floor, and from this the sample is taken. The English regulations say, "15. The selected bag or packages are to be emptied separately on a clean and dry stone or wooden floor, worked up with a spade, and one spadeful from each set aside. The separate spadefuls are then to be thoroughly mixed, and any lumps broken up by the hand or spade. From this mixture three samples, each from $\frac{1}{2}$ lb. to 1 lb. in weight, are to be taken and carefully and securely packed." There is another point to be considered. Sometimes we get manure sent in bulk to the farmer. I have myself sampled truckloads of guano, and I have known bones to be sent in bulk in trucks. Now, you have no provision for cases like that, and you are therefore at the mercy of the vendor—

13. *The Chairman.*] Is that provided for in the English Act?—I cannot say. I do not think it is; but it is a point which has to be considered. Now, as to the notification required to be given by the Inspector, the Stock Department suggest the following: "Not less than two clear days' notice shall be given to the vendor by the Inspector of the time and place at which he intends to take such sample." There are places, particularly in the North, which the vendor could not possibly reach in two days, and he would be entirely at the mercy of the people who authorised or gave such notice. Again, you would want a pretty large army of Inspectors if there is much work coming on under the Bill. The Act says that the Stock Inspectors appointed under "The Stock Act, 1893," shall be deemed to be Inspectors under this Act; still, there might be a call for the Inspectors to other different parts, and I should advise that the constables should also be Inspectors under this Act. I have not much more to say. In clause 11 there is a peculiar feature—

14. Would that officer be the person to see these samples taken?—Yes.

15. *Mr. Massey.*] You would intrust that to any constable?—Yes, I think so. They take samples under the Adulteration Act and under the Licensing Act. There is a point there I would strongly urge: that when the Inspector seals his sample he should also give the opportunity to the vendor to seal it also. It is so in only one Act that I know of, and that is the Licensing Act. It is wise, and it is a certain safeguard. In clause 11 of the Fertilisers Act it says, "In any proceedings under this Act the production of a certificate of the results of an analysis purporting to be signed by an Analyst shall be evidence that the fertiliser was submitted for analysis in accordance with this Act, and of the identity of the fertiliser analysed, and of the result of the analysis, without proof of the signature of the Analyst." They are putting a great deal on the Analyst there. They are not only asking him to be sure of his own analysis, but also sure of the identity of the fertiliser; in fact, you are making him go bail for the Inspector as well on a point of which he has no knowledge. It may be all right in point of law, but it certainly is complicated. In the second portion of clause 12 it would make it appear that it is just possible that the Analyst may be paid for attendance. It says, "If on such hearing it appears to the Court that the Analyst was called on frivolous or insufficient grounds the defendant shall be liable to pay the costs of the attendance of the Analyst." Now, the Analyst may be sent all over the country, and it is possible that somebody may pay him, but I cannot say there is much hope for him. I do not think there is much more to deal with. As I have said, I would like to see regulations under this Act. Regulations can be altered easier than an Act can. There is room for regulations to take up these different points I have mentioned. I also wish to repeat what I have said with regard to the English Act. To my mind, the English Act is superior to anything we have ever had. Since it has been the law it has done good work. The Hon. Mr. McKenzie brought in a Bill in 1892 which was as near the Act as possible, and, with the one small alteration of the method of sampling, it would have met all the requirements and would have been a perfect Act. I am now speaking of the Bill as introduced by Mr. McKenzie. That Act followed the English Act. In this Act we have gone in the opposite direction. That one was drawn in the direction of the English Act, and largely in favour of the farmer. This one is drawn on the model of the American Acts. The American Acts are largely brought out by the manure trusts, as at present they are masters of the situation. Therefore the closer you can get to the English Act the better it will be.

16. *The Chairman.*] Have you completed all you have to say?—Yes.

17. I only wish to ask one general question. You recommend that in place of the Act which is now proposed the English Act should be adopted in its entirety?—Well, as close as it can be to meet the requirements of the colony.

18. You also say that regulations—which I understand you to say are not in existence at present—are absolutely necessary?—I believe so. Most of the points of detail provided for under this Act would be better provided for by regulation as far as possible.

19. What about the English regulations? Would the English regulations be applicable to this colony?—I think so.

20. *Hon. Mr. T. Kelly.*] As I understand it with respect to the Bill we are now considering, you do not consider it is in the interests of the farmers?—The Bill as printed is certainly not in favour of the farmers. The farmer would have numerous difficulties to contend with under the Bill. There would be the difficulty of the Inspector obtaining the samples, and the inability of the farmer to have the sample analysed; and there are other difficulties. As this Bill lies before you it is absolutely hopeless for the farmer. I have advised that the words "unit-value" should be deleted. The words "materially differs" would have to be fought out between the Analyst, the vendor, and the Magistrate—

21. It would be difficult to say what the unit-value was to be?—That is so. It would be better if left to the regulations and the Analyst.

22. Do I understand that these amendments proposed by the Department are not all that is required?—I think not.

23. Could you amend the Bill in the direction that you wish for the Committee—

24. *The Chairman.*] You recommend the English Bill?—Yes. The existing Bill as altered by the Stock Department, with the additional alterations which I have suggested, would bring it so closely to the English Act that practically it would be the English Act.

25. *Hon. Mr. T. Kelly.*] You would prefer that the Act should be assisted by regulations on many points which it is proposed in this Act to include in the Act?—Yes.

26. I understand that the English Act could be easily applied to the colony?—Yes.

27. *Hon. Mr. A. L. Smith.*] You recommend that the manufacturer should be left out?—I think so. You cannot deal with a man who is out of the colony.

28. But there are many manufacturers in the colony already?—But if he is a manufacturer he is a vendor also, and a vendor is liable under the Act, unless he has a warranty from the manufacturer, and then the manufacturer suffers.

29. Well, now you say, Do away with the words "unit-value." How are you going to indicate unless you fix a unit-value?—That is, the proportion or percentage you mean, not value. The value is the selling-value.

30. You said it was a problem fixing this which many people—especially farmers—could not do?—I am sure they could not. If you take three points of varying percentages, and attempt to calculate the whole three as against one fixed sum, you have really a serious problem.

31. Is there no method by which there could be a well-known established value?—Oh, yes. We all use unit-values; but these unit-values, as fixed, for instance, by the Gear Company, are just 50 per cent. above what was calculated as the actual value.

32. Then, you recommend that these words should be struck out. What would you put in place of them?—I would follow the English Act.

33. Please read the clause again?—Fertilisers Act, clause 3, (c): it says, "A general description of the fertiliser, and its price; a full statement of its composition, showing the minimum percentage of the following ingredients when present, and the unit-value attached to each of them." It does not say, however, that the manure shall be calculated as under "The Manure Adulteration Act, 1892," clause 11, which says, "The certificate of analysis shall also state the total value of the manure sampled, on the basis of the value per unit per ton published by the vendor, any difference between such total value and the price charged for such manure to be allowed for by the vendor at the unit-price specified in invoice."

34. If it is less, that is to say?—That is so; but then all the vendor has to do is to put up his unit-values and cover himself.

35. Then you think that this clause should indicate the ingredients only?—Exactly; it should be a guaranteed analysis. The unit-value in the Bill is no criterion. Take the instance I have mentioned of——, where the total values were £8 1s., while the selling-value was £4. There is no criterion of what the unit-values are in that case. If you are going to have the unit-value in the Bill, then, as I have already stated, you should have it made plain that such values when calculated should be equal to its selling-price.

36. That is to say, the more simple it is the better?—Exactly. I would like to add a word or two. It has been suggested by some of the vendors that reverted phosphate should be considered—that is, dicalcic phosphate not soluble in water. They want to put "dicalcic phosphate soluble in citrate of ammonium." This is likely to cause trouble amongst chemists. It would be better to leave it as it is in the English Act—phosphate of lime soluble in water, and phosphate of lime insoluble.

TUESDAY, 13TH OCTOBER, 1903.

HENRY WILLIAM LAWRENCE, Acting Chief Chemist to the Agricultural Department, examined.
(No. 3.)

1. *Hon. the Chairman.*] Have you read the evidence of Mr. Pond with regard to this Bill?—Yes, I have.

2. He lays great stress upon the uselessness of including the unit-values in the Bill, as this would lead, he says, to complications?—That is a point on which I have very strong opinions—that the unit-values provision should remain in the Bill.

3. What reasons have you for that?—The reason I have is that it would enable a purchaser of manure to know the exact value of each manurial constituent in the manure. For instance, there is a value given to each of the manurial constituents—nitrogen, phosphoric acid, and potash—and if a buyer gets a quotation of so much per unit it enables him to figure out exactly the real value of the manure, providing the manufacturer sells the manure at its unit-value, which should be its real selling-price and not at a fictitious value.

4. You think a farmer could make the calculations so as to know the value of the manure?—It is quite a simple matter. For instance, we will suppose that the value of soluble nitrogen is 13s. per unit. If a farmer is making a bargain for 7 per cent. of nitrogen it is only a matter of multiplying 13s. by seven to get the value of it; the same thing applies to the other constituents, and the total of those unit-values is the value of the manure to the farmer.

5. Who is the authority for defining the unit-value of manure in the colony?—The unit-value depends upon the market value. Of course, the market value of a great many of these manurial constituents fluctuates from time to time. I do not know about this colony, but in the Old Country they publish in the agricultural papers from week to week or month to month the value per unit of all these manurial constituents, and a farmer can tell by that somewhere near whether he is paying the market value for the stuff.

6. Is that done in the colony?—I do not know.

7. Is there not a considerable difference in the value of soluble and insoluble manure?—There is a great difference.

8. I mean as regards unit-value?—In the value of soluble nitrogen and insoluble nitrogen there is a great difference.

9. Supposing that a manure-vendor gave a considerable amount of, say, insoluble nitrogen as manure: would there not be some difficulty, from a farmer's point of view, in ascertaining whether that was of any value or not?—A certain difficulty crops up there, but that is a difficulty which, I think, we cannot enter into.

10. For instance, supposing that old leather was ground, it would show a certain amount of insoluble nitrogen?—Yes.

11. Would it be of any use whatever to the farmer?—No.

12. So that if a vendor wishes to be dishonest that opens a considerable field?—Yes.

13. The farmer would be paying for articles which would be of no value whatever to him as manure?—Yes.

14. Does the English Act provide for unit-values?—Yes, I think it does to a certain extent, inasmuch as the analyst can only base his value of the manure on the unit-value.

15. Mr. Pond, as far as I can ascertain, was of opinion that the English Act of 1893 would be a greater protection to the farmers than this Bill?—Well, the English Act is based upon a different principle altogether. The idea of the English Act is this: that the farmer makes his own arrangements as to price and the percentages of the manurial constituents. It is a matter between the buyer and the vendor. But the law steps in to protect the farmer—to see that he gets what he is bargaining for. This Bill that we have before us at the present time appears to me to be based upon the idea that manufacturers shall keep standard brands of manures, and this Bill will see that the standard is kept up to the proper percentages.

16. Could you give us an instance with regard to, say, blood manure—that is a very good class of manure?—That is one of the best classes of insoluble nitrogenous manures.

17. What do you consider the unit-value of that?—I have not had much experience of the unit-values in this colony, and I would not say for certain, but I believe it would be about 7s.

18. Do you not think that the English Act would be a very good Act to apply to this colony?—I do think so, providing you do not obliterate the unit-values. I think that when a vendor is selling a manure he should state on the invoice or a certificate the percentages of soluble and insoluble nitrogen, phosphoric acid, and potash, and he should state the value that he attaches to each constituent—the unit-value—and the value should be the lowest price that he should sell at. That should be the basis of the bargain between the buyer and the seller.

19. Take, for instance, the process under the English Act. The vendor has to state in his invoice to the buyer the quantity, say, of soluble and insoluble nitrogen, phosphoric acid, and potash, and the percentages contained in that manure. The English Act, I understand, makes that a warranty, and if on analysis the manure does not contain those quantities, then the buyer has an action against the vendor. Would that not satisfy the conditions the farmers ask for?—Well, I think that is where the unit-values would be most useful. Suppose there was a deficiency of 1 per cent. of nitrogen: if that was worth 13s. a unit the purchaser would see at a glance the value of the manure, less the 13s., the value of the 1 per cent. He would know exactly the extent of the deficiency in the money value.

20. *Hon. Mr. Pitt.*] If a farmer contracts for certain unit-values, how is he to be assured that he gets what he contracts for? Has he to analyse the manure afterwards?—The English Act provides that he can get it analysed within ten days of delivery—delivery of the manure or the invoice, whichever is latest.

21. That is his mode of ascertaining whether the contract has been carried out?—Yes.

22. *Mr. Kidd.*] Of course, he would have to do that at his own expense?—The English Act gives him the means of having it done through the counties, and it is done, I think, for a merely nominal fee of about 5s. or 10s. If a purchaser thinks that his manure may not be up to the guarantee he gets it analysed for a nominal fee, and, of course, he can see then whether it is a case for action being taken or not.

23. There is no provision in the Bill by which the Agricultural Department would do that for the farmer, is there?—No.

24. *Mr. Bollard.*] You are of opinion that the manure merchant or manufacturer should supply an analysis with the manure he sells, giving a full description of it, and the unit-value of each manurial constituent?—Of each manurial constituent, and the unit-value that he attaches to it should be the selling-value, not a fictitious value.

25. Of course, it would be always regulated by the market price?—Yes.

26. *Mr. McLachlan.*] Does the vendor give a warranty along with each parcel sold?—He would give a certificate to the purchaser stating the percentages and the manurial constituents, and that should be a warranty.

27. With each parcel?—Yes.

28. *Hon. the Chairman.*] I understand that in England there are better facilities for having manures analysed by the various counties and Government Departments?—I think not. We have our Public Analyst here, and, I think, considering the population, we are in as good a position here for getting manures analysed as they are in the Old Country.

29. The Department only could undertake the analysis of all this?—It is a matter of whether the Department would take it up. At present they do the work for settlers and *bona fide* farmers, I understand.

30. *Hon. Mr. Pitt.*] If the Department cannot take it up, how is the purchaser to have his manure analysed?—I believe that this Bill provides for the appointment of Analysts. I may say that I do not think that the fees paid at Home by the buyers of manure cover the cost of the analysis. I think the Analyst has certain salaries from the local authorities.

31. *Hon. the Chairman.*] With regard to the unit-values, you think that the manufacturer should state the unit-value on every parcel of manure?—I think so.

32. Would he be able to fix any unit-value he thought fit?—Yes. Of course, that would be a matter between buyer and seller. If a would-be purchaser thought that one manufacturer was quoting him too much he could go to another and compare the prices.

33. If the invoice that he supplied were a warranty he would be very careful not to state the unit-value too high, I should think?—Yes, that is so. Most large manufacturers keep a resident chemist, and they are prepared to guarantee their manures within one-tenth of the percentage.

34. *Mr. Bollard.*] The unit-value is regulated by a standard?—The unit-value is regulated by the market price of the manurial constituent.

35. What I mean is this: there are certain constituent parts which are valued at a unit-value by a regular standard; a manufacturer cannot put on what price he likes?—It is regulated by the market value. For instance, take nitrogen soda, which contains about 19 per cent. of nitrogen; it is sometimes of very different values, and, of course, the unit-value of the nitrogen contained in it fluctuates according to the value of the stuff.

36. *Hon. the Chairman.*] Do you wish to make any other statement to the Committee?—There is one little matter that I would like to mention. It has been stated that citric soluble phosphoric acid—that is, the diphosphate of lime—should be allowed for, as it is a compound which is not of the value of the soluble phosphate, and it is rather more valuable than the insoluble; but as the methods of estimating this at the present time vary, and it depends a great deal upon the method that the individual chemist adopts, it is causing a tremendous amount of friction in the working of the laws in America, and I think it would be best left out.

37. Would it not vary with the age of the manure?—Oh, yes. The cheaper the phosphate used the quicker it reverts. A great many manufacturers use a common phosphate, which reverts very quickly. Well, of course, they want to sell it and get it off their hands as quickly as possible.

APPENDIX.

SIR,—
Otago Employers' Association,
Exchange Buildings, Water Street, Dunedin, 9th September, 1903.

I am requested by several of our members who are interested in the selling or manufacturing of manures to forward to the Committee the enclosed suggestions in regard to the Fertilisers Bill now before the House, and to ask that the proposed amendments be considered by the Committee. The proposals in no way affect the principle of the Bill or lessen its value as a protection to the purchaser, but are simply intended to provide for a reasonable measure of protection being extended to vendors. The notes and comments accompanying the suggestions will sufficiently explain their purpose and scope.

Trusting that the Committee will give the proposals every consideration,

I have, &c.,

JAMES N. E. GARROW, Secretary.

The Hon. the Chairman, Joint Agricultural, Pastoral, and Stock Committee, Wellington.

FERTILISERS BILL.

Section 3, subsection (1), (a). Add the following words: "if such manure is made in New Zealand, and if imported the name and place of business of the vendor." See section 3, subsection (1) of the old Act. In many cases where manures are manufactured in foreign countries it is exceedingly difficult to give the name of the actual manufacturer.

Section 3, subsection (1), (b). Delete this subsection.

Section 3, subsection (1), (c). Objection is taken to publishing further description than its analysis, as doing so would be giving away trade secrets and destroying the value of special knowledge possessed by individual firms.

Section 3, subsection (2). Delete clause 2; refer to section 5. Where the manufacturer resides outside the colony it should be sufficient if the vendor in New Zealand registers.

Section 6, subsection (1). Strike out the words "in his possession or." The objection to this is that the labelling of manure as it goes into store is almost impracticable. Large quantities arriving by train or steamer would require to be analysed while lying in the railway or wharf sheds. This would cause a delay in taking delivery which would not be permitted by the Department. It would further entail considerable expense on the vendor which would necessarily be passed on to the purchaser. Above all, it is unnecessary, as in a manufacturer's business the bulk of the material going into store is not sent out to the farmer in the same form, but is used in producing a manufactured manure. To insist on the raw material as well as the finished article being subject to this Act would mean double analysis without any additional protection to the purchaser.

Section 9, subsection (1). After the word "shall" add the following: "in the presence of a responsible person in the employment of the vendor."

Section 9, subsection (2). A provision should be inserted whereby the vendor shall have the right to have his portion of the sample also analysed by an independent analyst before the hearing of a case where proceedings are taken. In this section omit the words "the third part shall be retained by the Inspector," and insert a fresh clause as follows: "The third part shall be sealed, both by the Inspector and by the vendor or his authorised agent, and shall be forthwith deposited with the Inspector of Factories, to be produced only by the order of the Court if required."

Section 9, subsection (4). The method provided in the Bill for taking a sample is not sufficiently comprehensive. There is no objection to the amount of the sample (4 lb.). From the nature of the composition of mixed manures it is necessary in order to obtain a fair sample that the sample should be representative of the bulk, and this can be attained only by having several samples taken from different packages and mixed, the final sample being taken from the mixture.

Section 9, subsection (5). After the word "Inspector" add the following: "in the presence of a responsible person in the employment of the vendor."

Section 10. Delete all words after the word "attached." The Analyst is a chemical expert, not an agricultural expert, and it should be a matter for the Court to decide, after hearing evidence, whether any difference disclosed by the analysis is to the prejudice of the purchaser or not. To leave the clause as it stands would be to put it in the hands of the Analyst practically to decide the case before it was heard.

Section 11. Omit the words "and of the identity of the fertiliser analysed." This, if included, would prevent any proof of mistake where an obvious error had occurred through confusion of samples.

Section 12, subsections (1) and (2). No provision is made for a copy of the analysis being supplied to the vendor in a case where proceedings are to be taken. In common justice this should be provided for. In fact, in every case where samples are taken by the Inspector the result of the analysis should be forwarded to the vendor. Further, if proceedings are taken in regard to any particular sample, a limit of time should be specified within which time the proceedings should be taken. As to the presence of the Analyst at the Court, he should be present as a matter of course, to be cross-examined if necessary, and only in case of a conviction should the vendor be called upon to pay the expenses of his attendance.

Section 16. Add the following: "But in the case of an analysis by the Government Analyst proving unsatisfactory, publication shall be withheld until the vendor shall have had an opportunity of having the sample left with him by the Inspector also analysed." Also add, "Nothing in this Act shall apply to special manures manufactured to the order of purchasers." It is a common custom with many farmers to specify certain mixtures which they wish prepared for themselves. In such cases vendors simply wish to be saved special registration. The provisions of the Bill are so drastic that vendors feel that a fair amount of protection must be granted to them.

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