This real loss of 24  $\gamma_0$  is compensated by the *plus* value acquired by the silage. We know that fermented dough is more digestible and nutritious than unfermented dough. Similarly, we believe that fermented maize is more digestible than unfermented maize. What we thus lose in quantity we gain in quality.

There is also another cause of loss in silage, beside that developed by the fermentation : it is the loss caused by the maize being packed into silo before it has attained sufficient The chemical analysis of soils, it is true, may be produc-maturity. When the elements that are called carbo-hydrates tive of good results; but the process is long and difficult, and and protein are young and tender they decompose more easily, and therefore the muize which, not having attained a sufficient stage of ripeness, is watery, will from this cause undergo considerable loss. Whence we conclude, that it is important and even necessary to cultivate maize at wide intervals.

You will find in the report, there are copies of it on the table, which I have brought here for distribution among you all-you will find, I say that many samples brought to the station for analysis were planted at 24 and even 18 inches between the rows. Well, these samples have relatively, but a poor nutritive value : \$2 a ton, sometimes less; very few exceed this sum; while the samples of silage sown at 36 to 42 inches give a maize of superior quality, the nutritive value of which amounts to from \$2.92 to \$3 a ton. The difference you see is considerable.

Beides, gentlemen, I believe that we are the only people among those who make silage, that sow maize at such narrow intervals. I have had occasion to read the works published on this subject in the United States, in Europe, and even the report of the experiment station in Germany, and I nowhere find that maize is cultivated in rows nearer together than 36 inches, and in some caces I see that it has been sown at 42 inches.

This, doubtless, will surprise many of you, for it seems to be one of our habits to sow at narrow intervals. Well, the farmers of Quebec, especially the members of the Dairymen's Association, who have contributed to the making such a practical success of silage by recommending the construction of wooden siloes at a very reasonable cost; the farmers of this province, I say, must not remain in the rear on this point. I repeat it, the value of ensilage prepared from maize sown at intervals relatively narrow, is from 15, 20, and even 40 % less than that from maize sown at wider intervals.

But, it will be said : if the nutritive value of thick-sown maize is less, the quantity grown is greater. I hope to be able to prove that this is not the case. I had sown in experiment-fields different kinds of maize at intervals of from 20 to 36 and 42 inches. Here are samples of that maize thus grown and harvested at 20, 30, 36, and 42 inches. I weighed exactly the quantity given by each superficies of land of the same soit, and it will be easy to prove the real quantity of nut, itive matter yielded by equal parts of maize planted at the different distances.

To morrow you will be addressed on the construction of the silo, on the manner of building siloes, and on other important details.

I will add a few words in explanation of the notes in the report, particularly on the subject of chemical fertilisers. A great deal is being said nowadays about these manures. 1 must confess that at present they are rather costly, particularly what are called "complete fertilisers, i. e. those containing phosphoric acid, potash, and nitrogen. Phosphoric acid in plain superphosphate is rather more reasonable. But the use of phosphates is not arbitrary, that is, phosphate are not suited to ell kinds of land. We must know beforehand what I may call the appetito of the soil; that is to be learned by sowing on different crops different quantities of known chemical manures; but this should be done on a small scale, so

as to make experiments, for example, on some hundreds of feet of land.

I intend to make arrangements with Messre. Nicholls, of Capelton and .et them to send some of you samples of chemical manures, or complete manures, that you may experiment with on your own farm. If you will kindly make an exact report of their effects, we shall be able to give some useful information to enquirers.

for my part, I do not intend to make a great number of them a year.

And now for a few words on milk and its analysis. All our lecturers unanimously deplore the vile custom among our farmer-patrons of adulterating the milk cither by watering or skimming it. The tests applied by the inspectors succeed now and then, but sometimes chemical analysis becomes necessary. I was convinced of this by the sight of certain sampirs of milk brought to me this summer by some cheese ma-It happens that these samples are not always in good kers order; the bottles are not clean, the corks are old, and all these defects are apt to make the analysis of doubtful correctness.

With a view to saving you from troublesome proceedings, and to facilitate the analyses, I will ask you to provide bottles like this one, enclosed in a case, so that it can be forwarded by post. Each bottle will be accompanied by a note, the instructions of which I hope you will follow carefully. I will undertake to place, in each bottle, an antiseptic to preserve the milk from decomposition. If you observe the directions ex-actly, particularly that of filling the bottle just up to the mark, there will be no trouble in arriving at the percentage of butter, even if the sample do not reach me before the next day or the next but one.

I will make these analyses gratuitonsly, in the hopes of doing a service not only to the makers, but to the patrons as well. When the latter see that their frauds can be detected. they will become more prudent and less dishonest. So, in this way, I shall have contributed my share of beneficial service to your industry.

"hose reports on the table are for gratuitous distribution; and if any of you it the course of the year desire to obtain a copy, you have only to write to my office, or to the Department of Agriculture at Quebcc.

THE PRESIDENT-Is not an apparatus for chemical analysis rather expensive ?

M. L'ABBÉ CHOQUETTE .- There are several sorts. I was in hopes of being able to bring you one here that is simple enough, but the experiments I have been making to regulate its action have not proved satisfactory. This is often the trouble with this sort of apparatus : one day the indication will be correct, the next it will erroneous.

This bottle is not an apparatus for analysis-making; it is only a means of easily transmitting the samples of milk, and cannot cost more than fifty cents. I hope that there will be this spring, several of them for sale at the Secretary of the Association's office.

M. T. C. Cartier-Will he soil feel the effects of chemical fertilisers for more than one year.

M. L'ABBE CHOQUETTE .- If it is not too worn out, it will feel the effect for two and even three years.

M. CARTIER-I used a phosphate from Smith's J'alls on light land in the Townships, I found it answer, but 1 should like the soil to remember it; it cost \$35 a ton. (1)

M. CHOQUETTE-The chemical manures are very dear,

(1) Bone-dust will last 'onger than any other manure.

A. J. J. F.