

time, to avoid loss of nitrogen. By the action of gypsum, i. e., sulphate of lime, the carbonate of ammonia is converted into sulphate of ammonia, a non-volatile salt.

At the end of the experiment, the manure with gypsum had lost about 50 lbs. less organic matter than the other lot; so, the fermentation of the former had not been quite so destructive of the organic matter as in the latter.

“Passing on to the consideration of the nitrogen, we notice that there were $34\frac{1}{2}$ pounds in each lot as originally experimented with, each lot consisting of three tons of mixed manure. At the end of the experimental period, that with gypsum contained 31.6 and that without gypsum contained 31.4 pounds. The loss in each case was practically the same. This experiment, therefore, did not show that under the conditions of this investigation there was any fixation of the nitrogen by the gypsum. The loss, however, was very small—only one pound nitrogen per ton of manure—and I am of the opinion that the plan was such that it was sufficiently effective without the addition of gypsum. There was very little loss by this method, which briefly I may point out was as follows:—We put the manure into a bin, under cover, made it as compact as possible and kept it damp. Under these conditions we found the loss in nitrogen with and without gypsum practically identical.

By the Chairman:

Q. In other words, gypsum was of no benefit?

A. Under the conditions of our experiment it apparently had no effect.

With regard to *phosphoric acid*, the available had been increased from 12.6 to 18.8 pounds with gypsum, and that without gypsum to 17 pounds. But the figures are so close that Mr. Shutt does not attribute the difference in favour of the former to the presence of the gypsum.

There were 69 pounds of potash in each lot. At the close of the experiment, the gypsumed manure tested $55\frac{1}{2}$ pounds, and the other lot 57 pounds. “Here, again, the difference is so small that it may be said there was practically the same quantity in each lot. The presence of gypsum probably had little if any influence upon the potash contained.”

REPORTS OF THE FARMER'S CLUBS.

St. Benoit's Club (Two-Mountains).—The parish of St. Benoit has lately held a very successful festival. The Directors of the Club, assisted by their worthy President, had got up a ploughing match on the 24th of October. There were four classes, and the fortunate competitors were the following:

Medal Class.

1st prize, Damien Pilon; 2nd, Anthime Pilon, the son of D. Pilon; 3rd, Napoleon Levert.

Superior Class.

1st prize, Dalmas Dufresne; 2nd, Damien Masson; 3rd, Isaac Raymond.

First Class.

1st prize, Joseph Charbonneau; 2nd, Napoléon Corbeil; 3rd, Désiré Berthiaume; 4th, Alphonse Angrignon; 5th, Zoël Daoust.

Boy's Class.

1st prize, Arthur Pilon, who also won the silver medal offered for competition by Mr. Joseph Lalonde, a tradesman at St. Benoit; 2nd, Napoléon Desjardins; 3rd, Raoul Levert.

The following is something interesting; the MM. Pilon ploughed up a meadow with its standing crop of very abundant, long hay, by means of a chain fastened to the bridle (*batcul*) and the centre of the plough, so that it dragged along the furrow; the hay was first beaten down and then covered by the furrow. (1) The ploughing was done on the property of Mr. Girouard, the Notary.

After supper, at Mr. Pilon's, different subjects connected with farming were discussed by the President, Mr. D. Pilon, and the Judges, Mr. F. X. Laurin, Théodule Leroux, Joseph Lefebvre.

St. François Club, Beauce.—Experiment fields.—Effects of chemical manures on wheat.—Report of Mr. Joseph Bolduc.—My experiment-field was an old meadow, loamy soil, moderately rich, and rather moist. It was ploughed in the fall of 1897. May 10th, 1898, after harrowing, I spread over half the plot ($\frac{1}{2}$ an arpent) 150 lbs. of Capelton superphosphate and 50 lbs. of sulphate of ammonia, mixed with their bulk of earth, and then harrow-

(1) Probably Mr. Girouard, had a superfluity of winter keep for his stock; or else he could not have afforded to waste a fine crop of hay. Ed.

