

attained, for that can only be the outcome of thought, and as we lead men to think, to exercise to the highest degree their powers of intellect, we aid them to further development and their enjoyment of the powers and dignity of manhood.

We hold that the pages of this journal should be filled with the best thoughts of the finest agriculturists in the Dominion, for such the graduates, associates, and ex-students ought to become, so that no outside help should be necessary. With such a number of students annually going through the College there should be no lack of "copy"; indeed it will be a marvel if before many months are over the size of the paper is not greatly and permanently increased.

Then, we must again remark, that this paper offers exceptional advantages for correspondence between ex-students, and the exchange of notes on improved methods of work in addition to the regular publication of the Experimental Union reports. We honestly believe there are many such communications which would be of untold benefit to our readers, and we half suspect that some subscribers are sorry that they have not written during the year. "It is never too late to mend." We hope to see a great development along this line in future editions.

Now that our little barque is in harbour again waiting for the next voyage, let each student, past and present, be cogitating some plan for the improvement of the paper and extension of its circulation. Send in your suggestions to the new captain so that when the time comes to weigh anchor once more he may be well furnished with charts, new sails and all the latest possible improvements in machinery and steering gear.

It is a great pleasure to reflect on the sterling worth of the present students at the O. A. C., as well as the graduating classes; it bodes well for the future conduct of the paper.

While we are sorry to break up the pleasant acquaintanceship formed at the College we

cannot but rejoice that the world's stage will see such well-graced actors and reap the benefit of their example in applied scientific agriculture.

And now the present staff of editors has to resign. They do so conscious of many shortcomings personally, yet happy in knowing they have endeavored to fill their positions honestly. Their heartiest good wishes will ever follow the fortunes of the REVIEW, sincerely trusting that it may always be an unbounded success, and that year by year better and more competent men than themselves may be found on its staff.



## Agricultural.

### The supply of Phosphates for the Manufacture of Super-phosphates.

Abstract from a Paper by Mr. H. Voss, London, England.

GEO. HARCOURT, B. S. A.

(CONTINUED FROM JUNE ISSUE.)

#### CRUST GUANO.

The island deposits previously named under-go and all supply guano in a powdery form, the actual droppings of birds more or less washed out, whilst there are others such as Sombaero, Curacao, Aruba, Mexico, Navassa and Cayman which supply soft rock phosphate which has been termed crust guano.

The origin of most of these phosphates is probably to some extent bird deposits, but having been for a long time in contact with coal rock, the carbonate of lime has been converted into phosphate of lime and we now have the phosphate as rock.

Sombrero and Curacao supply the purest phosphate of lime, being free from oxide of iron and alumina, while the deposits on Aruba, Navassa, and some other West Indian Islands, contain considerable quantities of these oxides.

#### MINERAL PHOSPHATES.

Apatite, phosphonite and other mineral phosphates of lime were known to geologists