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The Dignity of a Calling is Its Utility.

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EDITORIAL NOTES.

It is with pleasure that we present to our readers this month a short article on a popular subject. To every thinking man a retrospect becomes a matter of habit. To him a contemplation of things past is as essential as earnest thought is in his present business. But to those of us who have time to think of present cares only, this article is very opportune. For although meant evidently for the class of '94 we think that valuable hints may be gleaned by all. We are confident that those who had the pleasure of reading last year's editorials will recognize in "Looking Backward" the same "spicy" style.

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In the balmy days preceding the late wintry weather, our senior Agricultural Editor seized with a spirit of adventure, resolved to tread the paths of the unknown. When a man, lithe and active, engages in a feat requiring superlative agility, spectators look on in wonder. But when a somewhat portly gentleman attempts to ride a bicycle, people look on with bated breath. Realizing the gravity of the undertaking, and with a faint idea of the probable consequences our friend had prepared himself for the worst. He was not disappointed. For notwithstanding the fact that he had provided himself with the available cricket and baseball protectors he now lies in solitary confinement with the College physician in attendance. Fearing that in all probability he would not be able to attend to his editorial duties this month, he immediately considered the advisability of providing a substitute. As soon, therefore, as he had recovered sufficiently to permit of his using pen and ink he communicated with an ex-student friend, who, ever ready to aid the sick and comfort the sorrowing, has responded with an excellent article on Dairying.

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Dairymen of to-day, in order to keep the standard of their dairies ever on the advance, must take every precaution to keep abreast of scientific investigation. A few years ago, to mention bacteria in connection with the dairy, was to call forth volumes of invective against scientific investigation. But now ideas are changed. No longer are our progressive dairies governed by the traditions of our grand-fathers; but, by the more recent rules of scientists. Therefore, we take pleasure in presenting to our readers some facts, which, although not new by any means, are of great importance in the dairy.

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Earlier in the season we were promised some very interesting

contests in the football arena, but we have been disappointed. True a match or two have been played by our teams, but they have been confined to foreign territory. Very little enthusiasm has been stirred up at home, and it looks as if we had decided to give football a severe letting alone. This state of things is to be regretted. Without football enthusiasm practice will be irregular, and without regular practice no team can hope to stand before an opponent. We have seen several instances of the results of irregular practice in the past; but hope that they may not be repeated.

AGRICULTURAL.

Common Ferments in Milk.



THE work of investigation along the line of agricultural chemistry during recent years has been exceedingly fruitful, and in no part of this broad field have the results obtained been of such real practical value as those ascertained in connection with the dairy. The causes of many important phenomena hitherto unexplainable have been revealed; and the cause known a remedy at once suggests itself.

Milk is an exceedingly complex substance, and, owing to the many changes it readily undergoes, it has been a very difficult body to successfully deal with. During the last few years, however, the science of bacteriology has taken such unprecedented strides, that, though the exact nature of many of its phenomena has not been explained, still the causes which lead to them and the manner in which they occur are fairly well understood. The idea once held, that all changes in milk were due to something inherent in the milk itself has been proved erroneous, for it was soon discovered that these agencies, whatever they were, were introduced into the milk after the time of milking, and more recently it has been proved beyond all doubt that all forms of fermentation, such as curdling, acid development, putrefaction of various sorts are due entirely to the action of various classes of minute microorganisms (bacteria, etc.) existing in the milk in innumerable numbers, and that these get into the milk after it is drawn from the cow. They do not exist in the mammary glands of a healthy animal, for if milk be drawn into a sterilized tube in such a manner as to prevent the access of air or any other foreign matter and kept thus it will remain perfectly sweet and unchanged for any length of time, showing no tendency to ferment in any way unless contaminated with bacteria. There are a great many classes of these, all of which produce their characteristic effects, and in many of the classes a score or more of different species have been found. The number of individual organisms is almost inconceivable, depending upon the age of the milk, but more particularly upon its temperature