

of the mare. During the summer, under favorable conditions, an observant man will notice that if the mare is in foal her coat almost immediately will naturally become more glossy and she will generally thrive better, and this will continue right through the winter. She will hardly be injured with her ordinary work; indeed, I myself think it is better for her to go on with it right up to the time of foaling, though chills should be avoided as far as possible, and sudden and heavy strains in the cart either backwards or forwards, but especially backwards. As the time for her delivery approaches, her bowels should be carefully watched, allowing them to be neither too dry nor too loose. She should be given a loose-box at nights, and as soon as wax appears on her paps she should be seen at least every hour, night and day.

When the foaling comes on her, the less she is disturbed the better, but it is often a very great saving of labor to the mare to help the foal away. Very often, if it is far on in the summer and the mare has been at grass, nothing more is wanted, as the navel breaks and the afterbirth follows immediately. If, however, the mare is in high condition, the navel generally requires cutting and tying, and it is advisable to take the afterbirth away, which very often saves *parturient laminitis*. The placenta of mares is not adherent as in cows, and I have always found it ready to come away immediately after the foal, or along with it. If it is retained, complications are sure to follow. I am not quoting theory, gentlemen, but actual practical, personal experience, gathered from the foalings of some hundreds of cases I have been present and assisted at. Mares in their labor occasionally lie down in such a position that the foal would be crushed against the wall when born. A word to the mare as she sinks generally avoids this, though I have seen it necessary to make them get up again. Only once have I seen a mare foal standing in natural labor. It is very often possible to detect approaching labor in a mare twenty minutes or half an hour before actual labor commences—yawning, drawing together of the body, smelling round the box as if in search of food, and a peculiar anxious look in the eye, with occasional cracking and bending of the joints, being the signs. All these little things are worth noting, and are helps to prevent the accidents which may often disgust beginners with horse breeding.

When the foal is born and the placenta removed, I am strongly in favor of making the mare get up, and—with a halter on—if it is the first foal, let her smell the foal and lick it if she will. Sometimes mares are frightened or cross at their foals at first, but it is often on account of undue interference on the part of the attendant. As soon as it is certain she is not absolutely savage with the foal, she is better left alone till the foal rises. I like to see them do this about an hour after they are born, and directly they find their legs they begin to think about sucking, though very often they are so stupid that they will try every place but the right one, and sometimes even will not suck when the pap is put into their mouth. When this is the case, one of three things is the cause—either nature says its stomach is not quite ready for milk, or there is something wrong with the milk, or something wrong with the foal. In any of these cases it is a safe thing to milk the mare nearly dry, and smear the milk over the paps and the foal's mouth, or in very protracted cases to give the foal some with a spoon. Milk coming on the mare long before foaling, and then disappearing again, means a weakness coming over the foal, and it is often in these cases that the sucking difficulties occur when the foal is born.

(To be continued.)

### The Ontario Agricultural College.

It is not so very long ago since the occupation of farming was much looked down on, and it was a common occurrence to hear a father say of one of his sons, "He is so dull and stupid that I shall make a farmer of him." Now this is all changed. It is gradually being recognized everywhere that farming requires as much brains as any other business; in fact, it is seen that the farmer who does not conduct his operations intelligently will never make a success of them, and will, at best, only be able to make a livelihood, with no further prospect in life.

It is now some years since the coming change in the farmer's standing was discerned by far-seeing, prominent men, and these set to work to see in what way the farmer could be best prepared for the coming order of things.



Third Year Students, O.A.C., 1895.

G. A. ROBERTSON. A. A. KING. W. A. KENNEDY. E. F. WHITE.  
A. T. WIANCKO. J. W. WIDDIFIELD. A. H. CHRISTIAN. D. F. KIDD.  
W. M. DOHERTY. F. ROWE.

The establishment of colleges, where the rising generation of farmers could be taught the science of farming, and the explanation of much that was going on about them on the farm, the reasons for which they could not give, seemed the best method by which this could be done.

The era of agricultural colleges thus began, and among the first to be erected was the Ontario Agricultural College, at Guelph, popularly known as the O.A.C., which was erected by the Ontario Government in 1873, on a block of land purchased from the late Mr. F. W. Stone, about a mile from the city of Guelph. During the early history of the college, it, like many others, passed through several vicissitudes, but these trials served to point out the weak spots, and the college advanced step by step till it justly won the reputation of being an institution inferior to none of its kind on the continent.

In fact, such was its reputation that its graduates were eagerly sought for by colleges in the United States to fill appointments on their staff. It is true that no recent appointments have been made by Americans of Guelph men to positions in their colleges, but this is solely because they are now turning out good men themselves, and, naturally, when they can do so, give the preference to home products.

The present staff of the college, illustrations of whom appear on our front page, are an exceedingly fine and efficient body of men, between whom there is the kindest feeling. At the head of them is President James Mills, M.A., LL.D., under whose fostering care the college has grown to its present size and usefulness. His early life was passed on a farm in the county of Simcoe, but the loss of an arm in a threshing machine at the early age of

have been constructed from sketches furnished by him and under his personal supervision.

In the fall of 1883, President Mills organized the farmers' institutes of Ontario, and took full charge as director of institutes, without pay, for ten years from that date. In conjunction with Professor Shaw, formerly editor of *THE JOURNAL*, he wrote the "First Principles of Agriculture," for use in the public schools of this province. This work was published in 1891, and has had a very large sale, not only on this continent, but in other countries as well.

As head of the college, President Mills is well known for his geniality and hospitality, to which many besides the writer can testify, and no more fitting testimony to his good management of the college can be wished for than that given by members of the Legislature of all shades of politics at their annual visit last spring.

The senior member of the staff is Professor J. Hoyer Pantou, who occupies the chair of Natural History and Geology. Professor Pantou was born in Cupar, Scotland, but most of his early life was spent near Oshawa, on a farm. He commenced teaching in 1865, in S.S. No. 2, Reach township, where he remained two years. After three years' more teaching at Celardale, he was appointed assistant master in the Oshawa High School. In 1877 he graduated from Toronto University, obtaining the silver medal in the department of natural science and the McMurrich medal for the best essay upon the results of original research. In 1878 he was appointed Professor of Chemistry at the Guelph college, a position which he held until 1885, when he received his present appointment.

Professor Pantou has contributed numerous papers and articles to the British Association and magazines and agricultural journals, besides a number of bulletins issued in connection with his department, and has lately published two books for the use of rural schools, one on economic geology and the other on entomology. In 1885 he was, without solicitation, elected Fellow of the Geological Society of England, and, in 1887, a member of the Victoria Institute, London. He has been a lecturer at farmers' institutes since their inauguration, and his lectures have been much appreciated. He has travelled a great deal during vacations, for the purpose of widening his knowledge of science, visiting experiment stations, and other places. In 1887 he visited the celebrated Rothamsted station in England.

Chemistry occupies a most important place in reference to agriculture, for without it many of the problems of agriculture could not be explained. Over this important department Professor Shuttleworth presides. This gentleman was born at Mount Albert, Ont., and, like most of the staff, passed his early life on his father's farm. He entered the Ontario Agricultural College in the fall of 1879, graduated in 1882, and was appointed assistant superintendent of the experimental department of the college the same year. This position he held till 1885, when he resigned. He entered McGill University two years later, and graduated from thence with the degree of B.A.Sc. in 1890.

Immediately after graduating, he was appointed Professor of Agriculture in the Prince of Wales College, Charlottetown, P.E.I., a position he was filling when appointed Professor of Chemistry at Guelph in June, 1891. During that summer he studied in Harvard University, making a specialty of organic chemistry, and entered on his present duties in October, 1891.

21 led him to the pursuit of teaching. He received his training in the public and grammar schools, completed his course and took the degrees of B.A. and M.A., as well the gold medal for general proficiency, in Victoria University. He received the honorary degree of LL.D. at a later date. He taught as classical master for some time in Cobourg Collegiate Institute, and was headmaster of Brantford Collegiate Institute for six and a half years. He entered on his duties as president of the Ontario Agricultural College in October, 1879. At that time the college was a great trouble to the Government, and not much credit to the country. Under President Mills' management it has grown to be a great institution, with a large staff, which is doing work of much value for the province. Nearly everything worth mentioning in connection with the college has been built and put into shape under the direction of the president. Most of the buildings