



COWS AT HAMRA ESTATE, TUMBA, SWEDEN.

The Student.

Published by the Old Collegians' Association, under the joint direction
of Past and Present Students.

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VOL. III.—No. 3.

FEBRUARY, 1904.

EDITORIAL.

The good season anticipated in our last issue has been realized, for, as articles on both harvest and vineyard will show, the results of the former and outlook for the latter are highly satisfactory. With reference to the vineyard, in fact, sufficient rains, with good ripening weather, have combined to yield what bids fair to be a record crop of grapes, and the detailed list of returns from this department of the College will be published in our next number.

The front garden and orchard continue to make rapid progress, though some of the younger fruit trees were kept back during the early spring by the presence of cutworms, but the older trees do not appear to have been affected.

Several new cement tanks have lately been built at the back of the wine cellars, and here it is intended to wash the grape skins after crushing. As this season will be the first in which these additions have been employed, the report on their use can be expected under "Vineyard Notes" in June.

The labor that Mr. Williams has expended on the garden has improved it a great deal, and the College may shortly be able to compare its front with those of similar institutions in the other States.

Our Frontispiece.

The illustration in the front of this issue represents a view of one of the cowhouses and several of the cows belonging to the Hamra herd at Tumba, in Sweden. An article on this subject, called "A Model Swedish Dairy Farm," will be found in this number.

March Social Gathering.

The committee intend holding the usual March Social gathering of old and present students during the Show Week, and anticipate a big meeting. Only two meetings are held a year, and, therefore,

all should try to make them a success. Old students should make these socials a general gathering of the clans, where the happy College days could be recalled and experiences exchanged.

The committee will not send out a circular *re* this meeting, so please accept this notice and let the Secretary know if you will be present. Keep this night open for your own social to be held at 8 p.m., Friday evening, March 4, at Ware's Exchange Hotel, Hindley-street.

Subscriptions.

In nearly every issue of this magazine we call your attention to the fact that your subscription for the year is due by addressing the wrapper in *Red Ink*. If you wish this paper to prosper and the Association to be a success, pay up the amount you owe, and don't let the financial part worry the Secretary and Editor, as well as the anxiety of getting out a good and interesting number. We cannot be expected to run the paper much longer if you do not pay your subscription. The expenses are heavy, and unless all contribute towards it when received, it means that the few who do pay up are sending to those who do not meet the obligation.

Remember the object of the Association and the good old times you had at the College, and the good you will be doing the institution by co-operating with past students for the benefit of present and future students, and pay up.

If the wrapper around this paper is addressed to you in *Red Ink* you are in arrears, and the Secretary will be glad to acknowledge the receipt of your subscription.

Mr. H. A. Parsons.

It is with pleasure that we offer our congratulations to Mr. H. A. Parsons, LL.B., on his appointment to the position of Consul for Japan.

Mr. Parsons, who is an old A.C.R. student, has always kept closely in touch with the College, and was until last year a member of the Old Collegians' Committee.

THE HARVEST.

By "No. 3."

The harvest is now a thing of the past, much to the relief of some and not a little to the regret of others of us; but we all look with pride upon the results of our labors, in the form of four well-built stacks, as well as some fourteen hundred bags of grain.

The harvest on the whole has been very satisfactory, but would have been far better but for the unwelcome appearance of red rust, which wrought havoc amongst the wheat; the damp weather which

prevailed at the time greatly helped its development. But for the rust certainly a larger quantity of better quality grain would have been reaped.

A new binder has been added to our list of implements—the "McCormick"—so that four binders were at work for the greater part of the time. The old Massey, one of the oldest machines, did as good, if not better, work than any of them. Operations began with the hay-cutting, which started on October 19 in the cross-drilled plots, at the west end of the "Island," namely, College Selection, cross drilled, and College Selection (an early variety) cross drilled with Defiance (a late variety), which was badly attacked with red rust.

In the yield of hay the College Selection, cross drilled, gave slightly better results.

The oats—Calcutta and Cape—at the top of "Island," were cut next, this yielding about 80 tons of hay; whilst a portion of the Calcutta oats was left for threshing.

It was found necessary to cut out about 60 acres of Fletts for hay, leaving the remainder for grain.

Cutting was finished early in November. Altogether we stacked about 500 tons, about 300 of these being at the "Island," and the remainder stacked at Fletts and No. 8.

The yield on the whole was a little under 2 tons per acre. The "Island" and Fletts gave better results than No. 6 and No. 8.

Binding for grain commenced about November 16 at the "Island" on the Neumann's wheat, which was also the first to receive attention from the two Martin's strippers, which were hired by the College.

The stripping and cutting for grain were both completed early in December.

A little variation in the proceedings was caused by a trial of two combined harvesters—McKay's "Sunshine" and May Brothers' "Climax." Both the machines gave satisfactory results, and the students spent an instructive afternoon in learning how to work the implements, owing to the kindness of the agents in explaining their respective merits and construction.

May Brothers' harvester did good work in fields 6 and 8, and a few students were fortunate enough to get an opportunity to work the machine. In the meantime the oil and steam engines were thoroughly overhauled, so as to be in readiness for one of the most important of harvest operations, namely, threshing.

This commenced on December 8 on about 15 acres of Calcutta oats from the top end of the "Island." These gave a yield of 38 bushels per acre.

The wheat was next tackled. About 80 acres of this was threshed. It comprised—Neumann's, which yielded about 15 bushels per acre;

King's, which yielded about 23.27 bushels per acre; College Selection, which yielded about 24 bushels per acre; total averaging about 20½ bushels. The wheat was finished on the 17th.

Dahlitz, comprising of about 36 acres of Cape barley, was started on the following day, and was completely finished on the 22nd. The yield in Dahlitz was 48.73 bushels per acre.

Through the energy of the officials and perseverance of the students the harvest was finished in very satisfactory time. Working from 5 a.m. till 8 p.m., the students beat the College record by putting through 177 bags of barley in one day, and had the satisfaction of being highly praised by the Principal and Farm Manager before leaving for their holidays.

VARIETY PLOTS (No. 6 FIELD).

Variety.	Yield per Acre.		Hay per Acre.
	Bush.	Lb.	Lb.
Fan... ..	16	57	2,342
King's	13	27	2,451
Smart's Pioneer ...	12	18	2,454
Gluyas	19	16	2,412
Jerkin	11	36	2,264
King's	15	00	2,889
Majestic... ..	15	17	3,074
Neumann's	13	20	2,778
College Selection ...	16	40	3,176
Warwick	12	51	2,709
Purple Straw	10	11	2,852
King's	16	44	2,852
Marshall's No. 3 ...	10	53	2,806
Leak's Rust-proof...	10	7	3,183
Dart's Imperial ...	10	11	3,389
Defiance	8	17	3,139
King's	18	53	3,222

The Old Year Out—The New Year In.

By IF.

"Only a couple more weeks, and then—Christmas," mused a student as he hung lanterns on our old war chariot, the "thresher," for a fresh start in the dark.

"Right away, Jakes!" shouts Anty. The engine hisses, a pair of legs dangle from the fly-wheel, the belt is on, and sheaves dust and bags of wheat are soon flying about in clouds.

"Why work so late?" asks a visitor.

"Why not?" answered "one of the clique."

But why are the students working by candlelight? Why are they out at 5 a.m. every morning. Some great magnetic force seems to draw them of bed and out to work every morning. This is indeed so! Christmas, but a fortnight ahead, is the great magnet. Ever since that morning the "boss" told them that "work meant Christmas dinner at home and loafing meant College plum pudding." meals were, for once in the history of the College, a secondary consideration—work first! How low lips hung that morning! How mouths watered! Belts were tightened and teeth set with grim determination to do or die—and they did and have done so till the present time—8 p.m.—when we find them working by two candle-power.

"Beg pardon, sir!" said some one near me. A match flared, and a laugh followed. A student had begged the pardon of "Dee," the old rake horse, who had accidentally stepped on his toe. At a signal from "the man on top" the engine is slowed down, steam escapes, and another weary day's work is o'er.

What a motley group they look as they troup off home! A few minutes are spent in extracting dust, straw, &c., from their ears, noses, and various cavities. A shower bath is indulged in, and at last we find them seated at tea. Here the day's work and the quality of the mutton, art, and "plum dough" are freely discussed. One student reckons threshing will be finished three days before Christmas; another says they've the hope of a snowball in the Northern Territory of finishing before Christmas; a third guesses we won't finish at all if we tackle "this pudden' ;" and so the talk flows on.

The moon shines forth, the stars grow dim, and the mosquitos sing "Pip-pip!" as the weary student crawls between his sheets. His dreams are sweet. He sees the turkey at home being fattened in readiness for the return of the prodigal son. He is sailing home over hills and plains in his gallant four-master, "The Bounder," with his mates Tom and Jack; and—"Ding-a-ring!" The alarm clock does its duty.

"Why, I haven't been in bed half an hour!" exclaims our man.

He rolls out of bed, props one eye open with a match, and examines his chronometer. "No, by Jove! 4.30; that's right. Oh, well, I must have some of that turkey I dreamed of." He slips into his "dungarees," and at 5 a.m. is again working like an automatic machine.

"Well, good-bye, Billy, old boy!" "So long, Walks!" Work is over. The race is won. Christmas has lost by a few days, and we now stand on the platform bidding "Adieu" to southern comrades. "Ta ta!" "Merry Christmas!" "Always say your prayers and wash the back of your neck!" and a heap of other fatherly advice is hurled at us as, amid many hearty handshakes, the train puffs off to Adelaide. I was left behind with two mates. A few minutes and our

train steamed in, and we are now scudding northwards. The student's dream is realised; but it is three men in a train, not three men in a boat. Thus ends our year as far as work is concerned. We will pass over the holiday with closed eyes. No doubt the doings of the R.A.C.'s would be worth recording during that week, but—a holiday is a holiday. After our week's vacation we Northerners again board the train and journey southward. As we step out of our carriage "Howdeedoo" and "Happy New Years" are exchanged with about a score of "our chaps," and we are soon on the road in the College "drag."

The new year has started. Work has begun. Every one is a little collar-proud after a whole week's spell; but now we are at it again, looking forward to the long vacation. Our "home" has undergone very few changes during our absence. A few fresh notices and fines are posted on the "bulletin board," several familiar faces have disappeared, and the fruit has assumed a rosier tint. On these cool, still mornings, while the little birds sleep and the bull frogs croak, and streaks of daylight in the east herald the approaching day, stealthy forms carrying a well-filled pillow-case may be seen creeping into the building. These pillow-cases are not full of fluff. Oh, no, ladies. They contain the best fruit in the orchard. The cock crows, breakfast is eaten, and we are again out at work, hardly realising that Christmas has come and gone. But it has. So all we can do is to work till the next is in sight, and in the meantime wish one and all "Good luck for 1904!" and in concluding quote that sterling motto,

"Never go ragged or squint."

A Model Swedish Dairy Farm.

Situated at Tumba, seventeen miles from the City of Stockholm, in pleasant hilly country, is the Hamra Estate, the property of Sir John Bertström. The writer visited Hamra in July, and, therefore, had the opportunity of seeing it when summer conditions prevailed. The whole property, which is considered to be one of the finest in Sweden, was looking at its very best. Water is plentiful. For chains of fresh lakes abound in this part, and summer feed was in abundance. There were about 150 cows in milk, most of them being Ayrshires, but a few were Shorthorn breed. The Jersey cow does not appear to do well in either Sweden or Norway, though in the more central parts of Europe it is a great favorite. The frontispiece to this magazine shows one of the cow byres and the construction of these buildings is exceedingly important in a country such as this, with its severe climatic conditions ruling for so great

a part of the year. The cows are kept entirely indoors from the end of September until beginning of June, though even in the winter they are usually let into an open yard for about an hour or so at the middle of the day. The cow-houses are constructed of wood with a floor of concrete sloping slightly from the centre to the sides, and the animals face one another across a passage-way, down which a light tramline runs from the foodroom. Each cow has water continually within reach, one trough serving a couple of animals. In order to ensure a passage of plenty of fresh air the usual hayloft above the cow room has lately been done away with; therefore, there is a clear space above the animal right up to the roof.

The creamery, pleasantly situated amongst trees, some distance from where the cows are kept, is a fine stone building, fitted with the most modern of dairy appliances. The milk on being received is immediately pasteurised, and from the appliance effecting this it runs direct to the separator. There are two steam turbine cream separators, manufactured by the Alfa-Laval Company, that treat the whole of the product of this farm. The cream, after being cooled, is collected in a ripener, where it is inoculated with a pure culture of lactic acid ferment. The ripening room adjoins the main room of the dairy, while next it is the laboratory, which is fitted with culture tubes and microscopes. Sir John Bernström is an ardent believer in the use of tuberculin, and the cattle are constantly watched by a veterinary surgeon.

The dairy is excellently arranged on the side of a hill, and advantage is taken of this slope, the milk being received at the higher end, and thus the use of pumps is entirely obviated. Steam and cold water pipes are handy in all parts of the building, and it would be hard to conceive of a more finely appointed structure, its tiled walls and floors adding greatly to the appearance of the internal arrangements.

The laborers on the estate, some twenty-five in number, live in regulation houses in different parts of the property. These houses are two-storied and built of wood in the old Swedish style, with red roofs and green lattice shutters, which are exceedingly picturesque in appearance, and as each has its plot of ground, with garden, the effect of neatness and cleanliness is very pleasant.

Mention has been made of the fact that the cows are watched closely on account of a fear of tuberculosis. Experiments have been carried out very extensively at Hamra in order that the best methods of combating the disease may be ascertained.

The Swedish Government, realising the importance of arousing public interest in the subject of tuberculosis, lately offered a prize for the best essay on the matter as referring to the dairy, and the veterinary surgeon on this estate was the successful competitor, his conclusions being based on the results of experiments conducted at Hamra.

THE NEW CHUM'S DIARY.

BY "SCAVENGER."

The following are the contents of a leaf of a diary found in rubbish heap at the back of the College buildings:—

April 21.—Got into train at Adelaide; journeyed to Roseworthy. Got a ride out to College in milk-cart, or pagnell I believe is the toffy name for it here. Took with us College supplies—a case of jam and bag of spuds. Cheers rent the air as we drew up at the steps, and a ragged whiskery crowd gathered round. (I thought the cheer was mine, so puffed out my chest and looked important, but found out afterwards it was the "welcome home" of a new case of jam.) Saw a lot of chaps smoking in reading room. Rushed in and gave "knit" when I saw a master coming. They grinned, and, receiving a nasty knock on the head from behind with a rope quoit, I decamped. Crept off to bed at last not feeling too gleeful.

April 22. Heard a great ringing of bells at about midnight last night. Rushed into the corridor shouting "Fire!" and ran into the arms of a "cove" swinging a bullock bell as if his life depended on it. Begged his pardon and went slowly back to my room firmly resolved that I would see the house in ashes before I got my wind knocked out with a bell again. Found out that the bell was the "get up" signal, so I hurriedly slipped into a bran new set of moles and blucher boots and ran downstairs. It was a cold winter's morning. "First out!" I muttered to myself while my teeth rattled to the time of Cock o' the North. Sat on some stone steps for half an hour. Another bell rang. I followed another "new chum" in to breakfast. Went out to work.

April 23.—Had a bad night. Dragged out of bed and out of room by string attached to my big toe. "Toe lining" they term it here. Bloke sold me a big book for five bob. Thought I'd made a good bargain till I was offered a similar book for 1/.

April 24.—Went out to work again. Chased a funny little machine tied on to five horses with chains. It's just like a magnificent gridiron with spikes sticking into the ground to keep it from going too fast; harriz I think they call it.

April 25.—Glee Club organised. The playing of "Romeo and Juliet" brought forth roars of applause—and laughter. Went to Gawler on bike; chased by a bobby for riding without a light; escaped. Had a good look around Gawler in the dark. Couldn't see much, but thought a lot from what I saw.

April 26.—Went to church on a trolley with some long stools across it. Dodged the complexion plate.

April 27.—Twigged a bobby on a horse in front of the College. I thought of my bike lamp and "mooched." Undue agitation caused by introduction of alarm clocks into lecture room for the purpose of waking up sleepy members of the class. Raided the kitchen in the night. Discovered two cold chops, a gnawed leg of mutton, a tin of plum jam, and a square foot of pastry. They were not to be found next morning.

April 28.—One of the chaps nearly scalped through trying to brush his hair with patent foot-power bottle washer.

April 29.—Cleaned out back room at request of third year students. I was told this is the work of every new student. On stables to-day. Set my alarm for 4.30 a.m. Bell rang, and I crawled out of bed and fed the horses, and on coming back found the time was 2 a.m. The hands of my clock must have slipped forward.

April 30.—Accidentally burned down a barn to-day. The fire brigade bolted. Lost a trouser leg during a hot encounter with a vicious pig with piglets.

Never go there any more.

P.T.O.

(End of leaf.)

VINEYARD AND ORCHARD.

Owing to the exceptionally good season experienced this year, coupled with good care and management, the vineyard looks better now than it has ever done before. Cultivation, hoeing, and all those other pleasant little "cops," which our old student readers will doubtless remember in connection with V. and O., were all got through in proper time. Scarifiers were kept busy all the summer, and in some parts of the vineyard received five or six workings. Old students, should they visit the College again, as we hope they often will, would see the "well paddock" flourishing with fine young vines of various ages, all being completely trellised.

The currants are being dried again this year. About a ton altogether was gathered, and they make quite a show down at the cellars. Ringing has proved itself a remarkably successful operation, and but for that the yield would probably still be hardly worth picking.

The growth on the vines this year is remarkably vigorous, and, in addition, the return is likely to prove the largest on record. It is difficult to say offhand what the average yield will be, but, not counting Naboths, I should say it ought to go between 1 ton to 1½ tons, which, considering such patches of vines as the well paddock being taken into account, is remarkably good.

Naboths, the young untrellised vineyard, will do well if it picks $\frac{1}{2}$ cwt. to the acre, but, considering that its only been in three years, this isn't bad; perhaps it may go a little over this mark.

Professor Perkins has had five tanks—cement—erected at the back of the cellar, and it is intended to wash the skins here this year instead of throwing them into the pit. Briefly, the system consists in passing water through the skins generally five times, thus abstracting the alcohol. The tanks are 3 ft. each way and five in number, and if old students are at all shaky as to the method I should recommend them to look up their œnology.

Bird-scarers have been put up at various points in the vineyard. Mr. Mazure's patent is used, and so far it seems to have the effect of keeping the starlings out of the way; but the sparrows reckon it would take more than a few marbles in a kerosine tin to clear them out.

One of Mr. Dobbie's bird-scarers is also doing good work here, and the inventor deserves to be complimented on his work.

The young trees in the orchard are not doing as well as they should have this year, considering the careful planting, &c., they received. On the whole, their growth is very disappointing. This is probably due to a visitation of cutworms in the spring. These seemed to prefer the young trees, and made rather a mess of them, and they don't seem to have recovered the check.

OATS.

Gawler.

Front garden looking well.

Third years seem to like wool trips.

Don't forget the meeting in Adelaide on March 4.

Plenty of grapes to be picked this year.

The third years took a trip with Mr. Jeffrey through the wool stores last December.

Through the kindness of the heads of the departments they were afforded an excellent opportunity of seeing everything they wished to.

Especially do they thank Messrs. Elder, Smith, & Co. for the luncheon provided for them.

We have to acknowledge receipt of the following publications:—
 "Canterbury University," "S.P.S.C. Magazine," "P.A.C. Magazine,"
 "Public Service Review."

The Standard Bushel of Wheat.

BY T. E. YELLAND.

Much has been written and a great deal more said on this vexed question by the farmers. Many and varied are the ideas expressed by them of the possible ways of overcoming the difficulty; but they are nearly all of one opinion as regards fixing the standard at the present time, and that is, that it does not give universal satisfaction. The question is asked, "How can the fixing of the standard be overcome with justice to all parties concerned?" While many farmers maintain that two standards, say, 64 lb. wheat per bushel as first grade standard, or No. 1, and 62 lb. wheat as No. 2 standard, the matter would be settled once and for all; and no doubt there is a good deal of real practical commonsense in their argument. They maintain that it will encourage them to clean their wheat better, and so try and always have their wheat graded to No. 1 standard. It would be a reward for selecting and giving extra preparation to their wheat before placing it on the market. But the same difficulties would crop up under this system as in the present one. Farmers, whose wheat was clean, but perhaps only weighed 63 lb., would think that it should be placed in the No. 1 grade; and then one of the buyers, who had a particularly fine stack averaging 65 lb., would take clean 63 lb. wheat, and still keep his average up above the 64 lb., and so the principle of the two standards would be broken. This system may be all right as far as the farmers are concerned, but there are difficulties with which the merchants would have to contend when selling that will always make them stick to a system that has been tried and proved workable until a better one is found. The merchants will only buy on a basis, and under a system that will give them some returns for their outlay. They are the men who hold the fort, and will not be dictated to by a few thousand farmers, who should, and can, if they like, take possession, and they would then be in a position to try these new ideas.

Under the present system the standard varies with the seasons, and for various reasons is a good system, but it has its faults, and works very hard on some farmers. Last year the standard was 63 lb. Now this year, as so much inferior wheat was about, it was reduced to 61½ lb., but as it was not fixed for this season until December 23, many farmers who had delivered their wheat were docked under last season's standard, and consequently lost 1½ per bushel more than they would under the present season's standard for inferior wheat. If this allowance was afterwards made to the farmer then there would be nothing to complain of, but at present it is often the farmers' loss and the buyers' gain.

To overcome this difficulty a fixed standard should be adopted—one not too high, that in a bad season could not be maintained, and not too low that the sale of our wheat would be damaged on the English markets. As this is the first season since records have been kept that the standard has been fixed so low, I would not take this as a basis, but rather make it a little higher, say, 62 lb. to the bushel. If this was done the farmers would know before each year commenced what the standard would be, and there would not be any losses by them through the lowering of it in the middle of the season. The farmers would find that this system was workable; they would still have to clean their wheat well, because the merchants would accept no foreign substance in it, no matter how much it went over the standard. In a good season the standard would scarcely be required, and in a bad season for grain, like the present one, would be found to be a fair and equitable basis upon which to buy and sell wheat.

The merchants would find this method of greater value to them than that of altering the standard every year as now. The very fact that much of our wheat is sold on the English market and elsewhere on the Chamber of Commerce standard, and often long before the current season's one is fixed, must have a detrimental effect upon those sales, and has no doubt often prejudiced buyers against operating early in the season, or only at a reduced price with what they would be prepared to give if they knew for certain the minimum standard.

This year many sales were made on the above basis, and up to December 22 no wheat would be taken unless it went the old standard of 63 lb. After December 23, the day the standard was lowered to 61½ lb., much of the wheat previously rejected was offered upon the same contract and accepted. When the wheat arrives at its destination and is discharged the buyers will find the first part averaging 61½ to 63 lb., and the latter half (which was first stowed into the vessel) going over the 63 lb., and nothing under; but as they purchased under the Chamber of Commerce standard they have no redress. Would it not be better for all parties concerned to have a fair and square understanding, and to fix a standard for all times, so that a man buying a forward contract will know that the wheat must weight 62 lb. or over, and be free from all foreign matter?

The high estimation in which our wheats are held on the English market would not be lowered by having a fixed standard, but would give it a greater value, while a varying standard, as at present, must have a detrimental effect upon any produce, for to be on the safe side in buying they must always buy on the lowest basis.

The main thing after is to have a clean and even sample, free from all foreign matter, and then with a fixed standard of 62 lb. to the bushel we will be able to command the highest prices on the markets of the world.

CORRESPONDENCE.

"ACCOUNTANT."—Debit the fine account, credit the currant account.

"PROF. W-L-N."—1. Sorry to hear the big boys tempt you so much, its real mean. However, think of me, and don't do wrong. 2. Respect your abilities greatly, but do not think you could get your diploma in a week. No harm in trying. 3. Re knowledge, don't let the staff imagine for a moment that they know half what you do; but it would only be kindness on your part to offer to "coach" them in whatever they are deficient. Permit us to enquire how "Demi's foal" is progressing.

J. P. NUTTS.—It is impossible to tell you more about colt-breaking that you already know. However, keep cool; don't get unduly agitated, and remember that unsolicited advice is rarely valued. 2. No; don't accept an under-Principalship; the position is too low for one of your ability. Hoeing is more in your line. 3. Not a bit of it. Lack of self-confidence doesn't figure in your make-up.

"MAG."—If you will persist in rushing aimlessly about, you must take the consequences. You want a sedative! Take 4 lb. sal-soda in one gallon of elderberry wine every fifteen minutes till feelings soothed.

"INDIGNANT."—It is perfectly true. The moment a student enters he is under surveillance. Heaven knows why.

A Visit to Roseworthy College.

A STRANGER'S IMPRESSIONS.

Arriving at Roseworthy we were conveyed to the College by a flash turnout, consisting of one spanking Pascarell and one not attached to an ordinary common or garden high four yellow wheeler double-barrel dog-cart kind of affair. The scenery passed on the way out, as seen (see the pun) through an ever-constant cloud of dust rising from a beautiful unmacadamized road, I took for granted was charming. Driving up the avenue we were confronted by a

massive structure bounded on either side by two windows, one bay and the other chestnut. The foreground was occupied by a beautiful brand new garden, which gave it quite a handbox appearance. We were received kindly and considerately as befitted our rank, and the showing-over process began. First we were conducted through the various rooms of the College. It is amusing to see the devices by which students make apparent their ideas of luxury, tidiness, adornment, &c. One room in particular I remember. At the door you cut your way through an unmistakable atmosphere of changed footwear. However, the window was opened, and after a while we revived. The chief principle of adornment here was peculiar; it consisted in covering as much chair and bed space as possible with drapery otherwise worn on the farm, and there called blueys, &c. The floor showed traces of crumbs, which at once suggested to me midnight revelry. The whole conveyed to you a sense of unfettered bachelorism quite irresistible in the wrong direction. However, it struck me at the time that a few hooks would overcome most of the difficulty. On repairing outside our conductor showed us over the vineyard, and pointed out some of the most profitable varieties of grapes grown, "Laffrosis," "Faulkneranus," &c.—too many to remember. On reaching the wine cellars my friend seemed much interested, particularly in the old wines shown, and in leaving the "bottle room" I wasn't surprised to see his coattails showing rather prominently.

We next repaired to the farm. My friend, who by this time showed signs of incomprehension—I wonder why?—would persist in showing me how a binder was worked; and after telling me that by the use of this valuable machinery butter-making, chaff-cutting, &c., &c., could be carried on successfully, I came to the conclusion that all that was required on a farm to make it a success was a binder in conjunction with my friend.

Satisfied with our scrutiny of the farm, we left again for Roseworthy, and concluded that after all Roseworthy College was not quite as bad as the papers have been painting it, and wish it accordingly every success.

Farmyard Manures.

A circular has been issued by the Board of Agriculture in England on the subject of farmyard manure, and some statements, taken as they stand without explanation or qualification, are very apt to mislead. It is there shown that a milk cow extracts in round figures about three times as much nitrogen, phosphoric acid, and potash from its food as does a fattening bullock, and the inference

is left to be drawn that therefore the dung is poor. In practice we may confine our attention to the phosphoric acid, because there is a superabundance of potash in most soils, while a pasture renovates its own nitrogen and increases the same the longer it is down. When everything is reduced to exhaustion of the fertility per acre it will be found that store cattle, sheep, and milk cows use up and remove about equal quantities of phosphoric acid, while in the case of fattening cattle—taking the figures supplied by the Board—a cow returns in her manure only one-fourteenth less of the phosphoric acid originally in the food than does a bullock. In ordinary practice this difference disappears, because where a cow is getting the usual allowance of cake and meal, and being fed at high pressure, her droppings are just as rich as those of a fattening bullock. There is an opinion abroad that dairying impoverishes land, and the Board of Agriculture has gone out of its way to strengthen this misconception by characterising cow manure as "rather poor." It is, therefore, necessary to put the matter in its true light, and show that this "poorness" has reached the vanishing point—even as shown by the Board's own figures—and that in ordinary practice the keeping of milk cows enriches the land quite as much as does the feeding of bullocks.—"The Dairy."

Russian Dairying.

Since the railway penetrated Siberia there has been a wonderful development of that region. The agricultural industry is progressing rapidly, and has given rise to quite a flourishing trade in butter-making, especially in the western district. In consequence of this butter-making industry the general welfare of the peasant populations has immeasurably improved. According to the "Board of Trade Journal," which quotes from the report of Mr. Henry Cooke, the commissioner, it is the villages rather than the towns which have benefited most by the railway, and it is the butter industry alone that has rescued the peasants from the actual starvation with which they were threatened from the late succession of three bad harvests in these regions. In respect both of the butter industry and the demand for agricultural machinery, the enquirer, whatever he may have heard or read previously, will find his expectations far more than realised. Both are largely due to foreign enterprise, the butter industry to the Danes, the increased sale of agricultural machinery to the Americans; but neither could in any way have attained the dimensions they have assumed but for the liberal assistance of the Government exhibited in every possible direction in the form of transport facilities, the supply of special ice trucks for butter, exemp-

tions from duty, the appointment of official dairy instructors, and the establishment of agricultural machinery depots, enabling the peasants to buy on easy terms.

It is worthy of note that Russian papers report an increase in dairies from 140 in 1898 to 1,107 in 1900, and 2,500 in 1902. The butter exports increased from 5,420,000 lb. in 1898 to 39,720,000 lb. in 1900, and 90,280,000 in 1902. According to a report received, through the Foreign Office, from Moscow, the Russian Imperial Government intends making, from 1904, an annual grant of 90,500 roubles, or well over £14,000, for various undertakings, with a view to improving and expanding the butter industry in European Russia; for the years 1904 and 1905, an annual grant of 77,500 roubles, or over £12,000, for the improvement and expansion of the butter industry in Western Siberia; in 1904, a separate grant of 7,000 roubles to organise butter-making societies in Western Siberia, and 5,000 roubles towards constructing special testing laboratories in European Russia. A large proportion of the major grants will be expended on the salaries of special butter experts and instructors, and in organising special courses of instruction.

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