

1880

The Student

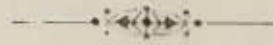


Roseworthy Agricultural College

Vol. V., No. 1.

JULY, 1905.

PRESENT STUDENTS.



FOURTH YEAR.

F. T. Cocper	W. J. Naish
R. H. Macindoe	P. H. Pickering
A. C. Jacobi	C. G. Savage
R. Wiese.	

THIRD YEAR.

J. Tassie	J. A. B. Stevenson
R. K. Lawrence	R. M. T. Richards
R. C. Jacob	S. J. Bottrill
H. C. Wilson	R. C. Pocock
C. Leppinus	R. Martin
A. W. Magarey	R. Wheaton

SECOND YEAR.

C. H. Heath	W. Motteram
R. Baker	E. Leishman
W. T. McLean	C. S. Robertson
W. R. Fairweather	J. W. Crompton
E. P. Yeatman	L. G. Paterson
J. W. Aldridge	R. Donnell
J. G. Sandland	R. R. Honey
C. M. Spicer	A. S. Hawker
F. H. Shand	W. H. Room
W. M. Kay	F. H. Room
J. Snell	

FIRST YEAR.

J. C. Buttfield	F. Packham
S. C. Billinghamst	W. Kühne
E. J. Clarke	A. V. Stephen
A. A. Macarey	J. K. Gardiner
J. A. Horrocks	O. J. Howard
L. H. Wright	N. Walters
F. K. Watson	R. G. W. Williams

SPECIAL STUDENT.—B. J. Titley.



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ROSEWORTHY COLLEGE.—Main Building.



ROSEWORTHY COLLEGE DAIRY HERD.

The Student.

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

J. WALLACE SANDFORD, F.C.S., Editor for O.C. Association.

R. C. TOCOCOCK, Editor for Present Students.

VOL. V.—No. 1.

JULY, 1905.

EDITORIAL.

THIS issue of the *Student* brings us to vol. 5. The old third year men have not gone, as is usually the case, but have returned to continue practical work, and what lectures they wish to take over again. Our new year has been started with quite a large number of new faces, totalling in all about 22. There is a very big second year this time on account of a number of new students passing into its ranks.

The season this year promises to be a good one, rain being plentiful and the crops up to the present in a first-class state. The stock generally are in a good condition; the lambing especially has been good, being favored with moderately warm, though wet, weather. The new stable at the farm has been put into working order, and answers well the requirements at present.

A number of plane trees have been planted around the farm, which will add greatly to the general appearance of the place, they have been put in chiefly on the East side across paddock No. 8.

A number of small garden plots are being planted in the rear of the main building and around Mr. Russack's new residence, which are under the supervision of Mr. Quinn. The garden this year has been exceptionally good owing to the diligence of Mr. Williams, the gardener, who spends all day and part of the night in the garden.

OUR FRONTISPIECE.

Professor Perkins has kindly lent us a block of the College main building, with one of the dairy herd, which also appears in our leaves, a description of which is given under dairy notes. These pictures were photographed by Mr. R. K. Lawrence, and do him great credit.

SCHOLARSHIPS.

Again as last year the whole of the six scholarships have been taken and well competed for. The winners are as follows: District No. 1, representing Adelaide and the municipal corporations of the vicinity, was won by Fred K. Watson, of Plympton;

No. 2 district by John Carey Buttfild, of Pewsey Vale : No. 5 district by William Christian Kühue, of Roseworthy ; and No. 6 district by Stephen Chestle Billingham, of Merriton. The districts of No. 3 and 4 were not represented by competitors, but were awarded by the Hon. Minister to Osmond John Howard and Edward James Clarke, respectively, who qualified in district No. 1.

THE DANCE.

The small dance was held at the College on Friday, June 2nd. Owing to the efforts of Mesdames Perkins, Jamieson, Laffer, Russack, and the Misses Haslam and Easton the dance was a great success. The students wish to tender their sincere thanks to these ladies for the generous way in which they furthered our efforts. This year now that we have none of the gentler sex in our midst we are at a loss to know what to do without them, but owing to the work of the ladies mentioned the difficulties were overcome.

MR. RUSSACK.

Our best wishes are extended to Mr. Russack, who was married last March to Miss Page, of Adelaide. A suitably inscribed wedding present, consisting of a silver tea service, was presented by Mr. J. A. B. Stevenson on behalf of the students and himself.

IN MEMORIAM.

We regret to hear of Leader's death, together with her foal of last year, which resulted through an extra feed of wheat bringing on enteritis in the first case, and with the foal the more sudden death of tympanitis. They will be greatly missed on account of breaking up the fastest drill team of the farm. Two more of the young horses, a colt and filly came very near to dying from the same cause, but, owing to the energy of students under Mr. Desmond, death was avoided. The above cases gave excellent scope for student veterinary practice, but it is to be hoped that the work will not be repeated.

TENNIS.

Tennis has become an important item of late, but owing to wet weather it has been impossible to give it as much attention as we should have liked. A tennis tournament has lately been arranged amongst the students, the victor of which is to receive a racquet presented by Professor Angus. This arrangement has led to much increased enthusiasm in tennis, and it is hoped that by so doing the game generally will be improved. Thanks are extended to the Professor for his most generous offer. Up to the present the competition is very keen, and the handicapping has been well arranged. The winner's name will be given in our next issue, the tournament being as yet unfinished.

OLD STUDENTS' CUP.

The silver cup presented by the Old Students' Association for the best man in veterinary science and agriculture (practical and theoretical), has been won this year by Robert Wiese, of Bordertown. We congratulate him upon his success, as he was also gold medallist winning by a big lead in the number of marks. We hope that his work will be continued with the same marked success as it has been during his college career. He has won every prize possible for him to get, with the exception of the first year silver medal, and in that he came second, losing by one mark only.

SPORTS AND DANCE COMMITTEES.

President—Professor Perkins ; Vice Presidents—Professor Angus, Mr. F. Russack ; Sec. of Sports—R. Wheaton ; Assistant Sec.—R. Baker ; Treasurer—J. A. B. Stevenson ; Committee—S. J. Boltrill (3rd yr.), C. H. Heath (2nd yr.), A. V. Stephen (1st yr.) ; Captain of football team—C. Leppinus ; Vice Captain—A. V. Stephen ; Captain of tennis team—C. H. Heath ; Vice Captain—J. A. B. Stevenson ; Tennis Committee—J. A. B. Stevenson (3rd yr.), C. H. Heath (2nd yr.), J. A. Horrocks (1st yr.) ; Dance Committee—R. C. Pocock and H. Wilson (3rd yr.), W. R. Fairweather and C. S. Robertson (2nd yr.), J. K. Gardiner (1st yr.) ; *Student* Committee—R. C. Pocock, Ed., and R. C. Jacob (3rd yr.), W. R. Fairweather and C. S. Robertson (2nd yr.), E. J. Clark (1st yr.) ; Council Committee—J. A. B. Stevenson (3rd yr.), F. Shand (2nd yr.) ; F. K. Watson (1st yr.) ; Librarian—Mr. F. Russack ; Sub Librarians—J. A. B. Stevenson, R. C. Jacob, B. Titley, H. C. Wilson, J. Tassie, jr.

ELECTIONS.

We do not take sides in politics, but when one of our own members goes before the electors at a general election we feel it our duty to say a few words. Mr. A. M. Dawkins contested the Barossa District, and although he did not gain one of the desired seats he polled very well, and as old students we must congratulate him upon his energy in trying to gain the distinction of being one of our lawmakers. We may not all agree with his views on present day politics, but we know from our acquaintance with Mr. Dawkins that he is a straight goer, and one who would not trim his policy or sacrifice his principles for the sake of getting into Parliament. His advocacy for scientific farming and agricultural education would make Mr. Dawkins a valuable acquisition in our Legislature.

SCHOLARSHIPS.

Mr. T. A. Wilson, of Port Pirie, in writing to us has added a word of approval in our endeavors to make the scholarship come within the reach of every school boy or farmer's son who has attained the ordinary public school's education. But Mr. Wilson adds :— "Even now they will not benefit the most deserving, i.e.,

intelligent sons of poor farmers, only able to get a provisional school education, and from irregularity of attendance (owing to being required at home) do not perhaps get out of the third class by the time they are 13. I know such cases do occur, and while I say 'shame to the parents,' it perhaps cannot always be avoided." It is impossible to make rules and regulations to meet every emergency, and we think that the scholarships have been brought as low, from an educational standpoint, as the most exacting could wish. There must be some test, and Mr. Wilson knows that unless a boy is well grounded in the elementary subjects before going to the College he is placed at a big disadvantage studying minor subjects and missing the higher and more important subjects which boys more advanced in education can give greater attention. Mr. Wilson expresses a hope that his son will obtain one of the scholarships later on. We wish his boy success when he goes up for the examination, and we trust the alteration we have advocated in the past will enable him to gain a three years' course at the Agricultural College.

MARCH SOCIAL.

Our March social was held at Ware's Exchange Hotel on Friday evening, the 3rd (show week). Mr. J. Wallace Sandford presided over a moderate attendance. The meeting was of a social character, and a welcome of old students was extended to Professor Angus. Mr. A. G. Pritchard moved "That the best thanks of the Association be extended to Mr. T. E. Yelland for the services rendered during his term of office as a member of the Council of Agriculture." This was seconded by Mr. C. F. Heyne and carried unanimously, general regret being expressed at Mr. Yelland's resignation from the Council. Professor Angus in a short address gave some particulars of experiments he wished to see carried out in S.A., and expressed strong appreciation of the cordial reception he had received by the farmers of this State.

SUBSCRIPTIONS.

Old students are reminded that subscriptions are due to the Association for the year ending September, 1905. If you have not already paid the Secretary will be glad of yours at an early date. If the wrapper around this issue is addressed in *red ink* you are in arrears with your subscription. Please remit early.

The Football Trip.

(By "CASUAL OBSERVER.")

AFTER many anticipations (joyful and otherwise), at last dawned the glorious 9th of June, when we were to bid farewell temporarily to our rural home while we tried conclusions with the Adelaide college teams at football, namely, Princes, Saints, and Christian Brothers. By daylight all the team were

astir, packing luggage with one hand and eating breakfast with the other, and by 6.50 were all aboard the drag, behind another famous College team (not footballers), who were as eager for the start as the boys. Their eagerness was shortlived when they struck the road, to say nothing of striking against Archie's whip, which he handled with great vigour and skill. The road was in a very bad state owing to recent heavy rains, and judging from the way the drag went over it, it would make excellent billiard tables. We arrived in Adelaide safely, without mishap, and at 3 o'clock we met St. Peter's team on the Adelaide Oval. The game was very evenly contested, and the College led till near the end, when Saints secured a free mark and hoisted the two flags, which decided the game for them by four points. Final scores were—R.A.C., 7 goals 14 behinds; Saints, 8 goals 12 behinds. Hard luck, College! Naish shone out prominently in marking, and the following also played well:—Cowan, Weise, Stephen, Baker, and Pickering. Cowan was of great assistance all through, and on the whole the Roseworthys deserved a win.

As we were to play Christian Brothers next morning, we had not very sanguine hopes, as we would probably be stiff and tired. We started at 10.15, and before long the College had one goal on the board, which was punted by Weise. This gave us hope, but alas! it was only a flash in the pan, as after that we only scored a few points. Our fellows lacked combination, as well as being outclassed in handball. The final scores were—Christian Brothers, 10 goals 15 behinds; R.A.C., 1 goal 4 behinds. After this defeat we were considerably down in the mouth, but we still had hopes (very slight ones, certainly) of pulling off the match with Prince Alfred when we met. The best players for the College were Stephen, Weise, Naish, and Pickering, Bottril also doing good work in the back lines.

On Monday afternoon, after their spell, the fellows were considerably "fitter" than they had been in the other matches, and were full of hope. They seemed to forget the other past losses, and only looked forward to the near future. Cowan was to be with us again this match, which altered the looks of things, and when Roseworthys entered the field they were very confident. The ground was in a very heavy and mucky state, which did not seem to agree with the Princes' forwards, who only notched 4 points up to three-quarter time, while the College scored frequently. Right through the "ploughboys" had the best of the game, to say nothing of the barrackers, who threw their advice away to us, "Longin," "Fatty," and "Fatty's Pal" getting a good share. The scores when the bell rang were as follows:—R.A.C., 4—5; P.A.C., 1—6. The chief shining lights in the game were Cowan, Weise, Stephen, Pickering, Bottrill, and Richards. In this game the first named two did some excellent work.

After this win the boys were jubilant, and shouted songs till

they were hoarse. We left Adelaide by the 7.10 train, and during the two hours after the match the win was celebrated in a good old way up in town, and by the time the train started they were in excellent spirits, having apparently forgotten altogether the result of the two earlier matches, and returned to the College well satisfied with the result of, at any rate, one of the contests.

We arrived at Gawler and boarded the drag, which was ready waiting. We proceeded through the town, and judging from the words we heard in the song, the College had and were at the present "on the ball." On arriving home once more, we munched some real College cake. Oogh! I shudder at the thought and shake at the feeling (with apologies to the cook). After this we retired to dream over recent victories we intend to win, and to think of next year's football trip.

Farm Notes.

(By "EM.").

THE seeding implements have ceased their performances, and the various paddocks sown this year are now giving up their available stores of plant food to the different crops, amongst which the barley is showing exceptionally well.

No. 9, with varieties of imported barley from France, is displaying them to their new conditions, amongst which Guymalaye is leading the way, and from all appearances now presented by these new arrivals some big returns should follow.

No. 16, sown to Cape barley, is so far holding its own with the imported competitors, and this variety to keep up its reputation will, if the season remains favourable, have a fair fight for supremacy as the maximum grain producing barley here.

"Dahlitz," seeded with oats, is showing good strong plants, and with the heavy rains just delivered should give the broadcaster a reference, and help the live power on the farm next year.

No. 7, sown partly with a mixture of oats (Calcutta) and wheat (Silver King) should deliver a useful crop for hay, and give the different binders a chance of showing their worth.

Some hay manuring tests have been given a trial here, and may give useful results as to the most profitable dressing of fertilisers. King's Early and Marshall's No. 3 finish the paddock, and these two renowned hay wheats will also afford an opportunity of judging their worth.

No. 3, sown partly with a mixture of oats, wheat, vetches, and peas, also barley and peas, is growing rapidly, and promises to give a useful ensilage crop, and will tax the strength of the new dairy appliances for competing with an increased milk supply during the summer months. Grain from selected ears of Cape barley has been sown on a portion of this field, and increased yields from the largest ears are expected. The results

will be watched carefully to note the comparison of the yields of the different-sized ears of this important cereal, which is increasing its hold of the area cropped.

The balance of the field is giving its attention to different species of wheats imported from France, also varieties of barley and oats, and will afford an interesting object lesson.

Flett's, sown broadcast with Gluyas and King's, is showing well, and this field should keep up the name of the two leading varieties grown.

No. 4 has been allotted to experimental research, in the shape of rotation plots and manure tests. The results of these tests will guide the future of our practice here for the maximum returns from the soil. Sixty-two two-acre plots have been set aside permanently in this field. The far end is supporting about 20 acres of Calcutta oats for hay. Ebsary's A, is carrying a very useful catch crop of rape, mustard, and clover. The rape and mustard are showing very favourably, and will help the young lambs to develop their mutton. The clover is coming on slowly.

Fallowing has commenced with the application of two three-furrows to the Island Nottles.

No. 6 is being tormented with singles, whilst No. 5 is being reversed by about 50 acres to carry a crop of kale, which will afford useful feed later on.

The heavy rains have placed confidence in the ewes and lambs, which are increasing their proportions on the rapidly growing feed.

Horses are in good nick, and should move the ploughs without too much argument.

The ploughs received favourable attention and a coat of paint before commencing their journeys.

The Butter, Cheese, and Bacon Factory is "Inchin it along," and will present a lively appearance to the farm when completed.

The dairy herd is again gathering courage to increase its milk flow on the early feed.

The Ayrshires are looking in good order, and should advertise their breed at the next show in Adelaide.

New stabling has been afforded the horses, and a yard also added, which will give less anxiety to stablemen as to the whereabouts of the horses when watering in the early morning.

"Leader" has left her name in the stable and a useful colt to take her place, having succumbed after a hard fight to the effects of "inflammation."

The new pigstyes are now being occupied, and are providing useful accommodation to the grain consumers. Yards and shelters have also been erected.

The farmyard has received a useful coat of rubble and sand.

The Vineyard.

(BY H. E. LAFFER.)

SINCE the last *Student* was published the 1905 vintage has been completed. Before the old year was past it was very evident that the yield must necessarily be small for various reasons.

In the first place a late frost in October commenced a list of adverse circumstances, completely ruining any prospect of a crop from a large number of vines. However, notwithstanding this, the vines recovered themselves, and up till the end of November they had never looked better nor made such good growth. The berries were well developed, and at any rate there was a reasonable possibility of us securing a fair crop.

During December such dry conditions prevailed that all the vines began to suffer, and the whole aspect of affairs was changed by the last two days of the year.

These two days established a record, so far as we know, registering 117° and 119° in the shade, and accompanied by driving sandstorms, such as every old student has experienced. No wonder, then, that on New Year's Eve all plants exhibited an exhausted and dragged appearance. Grapes hung shrivelled on the bunches, and they still hang, dry and black, from the leafless shoots.

Another heat wave had yet to be experienced; four successive days averaging 116° . This just about completed the drying-up process, and when several thousand starlings had fed on the remainder, it is small wonder that, of what should have been fully a 50-ton crop, barely 20 tons remained to be gathered. The vintage was an exceedingly easy one, the picking in the first place being very slow on account of the small crop, and then the weather was all that could be desired. Warm, clear days prevailed, and the nights came up cool and clear. Consequently, practically no cooling was required, and this of course almost totally eliminated the necessity of nightwork.

From the 1904 vintage we made upwards of 5,400 gallons of wine; but this year, from a larger area, only 2,500 gallons resulted. With the berries poorly developed it is impossible to make a good quality wine, so on the whole we may say that the 1905 vintage was not altogether satisfactory.

We were enabled to carry out our experiments regarding the amount of alcohol retained by the skins after pressing. This leaching process was tried in the 1904 vintage, and though to a certain extent satisfactory, we were entirely working in the dark. However, the experience we gained then was put to good use this year, and the experiments carried out were far more complete in every respect. Again profiting by experience we find that there

are many ways in which improvements can be made, and these we hope to put into practice next year.

Changes can be made in the fitting of the tanks, also in the number, which might be increased from five to eight or ten.

The general method is to have five tanks, and to draw off from No. 5 each time as much liquid as will fill the tank packed with skins. However, we found it more satisfactory to only draw off while the liquid showed a strength of 10 per cent. absolute alcohol or over.

For instance, our tanks will each hold 50 gallons of water plus skins. In drawing off we found that after removing 10 or 20 gallons the alcoholic strength had been reduced to 9 per cent. When this was ascertained the liquid was passed on to fresh skins, and from these another certain quantity was taken. In this way the strength of the liquid drawn off was maintained at about 10 per cent. of absolute alcohol.

At the same time samples were taken from each tank in order to determine the way in which the strength decreased. It will be seen by the appended table that after five successive washings very little alcohol remained. In some cases it will be seen that a rise in strength has taken place, but that is accounted for from the fact of this liquid having stood for a long period, such as over night.

In one instance we found that on drawing off from a tank of fresh skins no rise in strength had taken place. This was due to the fact that this particular lot of skins, after coming from the press, remained exposed in a heap for about 24 hours, and during that time had evaporated all the alcohol contained in them. This example instances the necessity of using the skins direct from the press.

The following table will show the strength of each tank at each successive washing :—

Tank 1.	2.35, 4.9, 1.1, 1.2, 2.1, .7	per cent.
2.	7.1, 4.6, 3.0, 1.1, .45, .05	per cent.
3.	8.5, 6.4, 3.7, 3.2, 2.4, .6	per cent.
4.	9.9, 8.6, 7.4, 6.0, 3.7, 2.4, 1.0, 0.3	per cent.
5.	11.0, 9.5, 8.1, 6.0, 5.3, 4.1, 2.6, 1.7	per cent.
6.	10.5, 9.3, 7.9, 6.3, 4.9, 3.5	per cent.
7.	9.6, 7.9, 6.6, 5.6	per cent.
8.	10.6, 9.9, 8.6	per cent.
9.	11.3	per cent.

The following will show how the strength decreased with each ten gallons drawn off :—

Tank No. 5. Started at 11 per cent.

After 10 gallons	...	...	10.3 per cent.
" 20 "	...	...	9.5 "
" 30 "	...	...	9.0 "
" 40 "	...	...	9.3 "
" 50 "	...	...	8.2 "

Tank No. 6. Started at 10.5 per cent.

After 10 gallons	...	...	10.8 per cent.
" 20 "	...	...	10.7 "
" 30 "	...	...	9.3 "

Tank No. 8. Started at 10.6 per cent.

After 10 gallons	...	...	10.6 per cent.
" 20 "	...	...	10.4 "
" 30 "	...	...	9.9 "

Tank No. 7 was passed over on account of the skins having been exposed too long.

With the last tank, No. 9, the drawing off was continued up to 100 gallons, with the following result :—

The strength when starting was 11.3 per cent., and decreased after each 10 gallons as follows :—11.4, 10.9, 10.8, 10.6, 10.5, 10.25, 10, 9.5, 9.2, 8.8 per cent.

Thus from about four tons of skins was extracted about 200 gallons of liquid of an average strength of 10 per cent. absolute or 17 per cent. proof spirit. What then must be the amount of spirit lost annually by some of the largest makers ?

The whole process is simple, and apart from handling the skins very little labor is required, and in a bad year much valuable spirit might be saved.

As a check on the leaching process, the skins were treated to direct distillation, even samples being used in all cases. 750 grms. of skins were made up with a litre of water. Distilled over 700 C.C. and redistilled 425 C.C. Made up to 500 C.C.

Of four samples tested the resulting strengths were :—10.4, 10.1, 12.3, 11.9 per cent. That is—10.4 per cent. of 500 C.C. = 52 C.C. of pure alcohol. That is—750 grms. skins contain 52 C.C. of pure alcohol.

Take the specific gravity of alcohol as .794 and this will give us as a result 41.288 grms. of alcohol in the 750 grms. of skins. Roughly this amounts to 5½ per cent. by weight. Thus it is readily seen what a quantity of spirit is lost where the pressed skins amount to some hundreds of tons.

In order to verify these results, we obtained samples of skins from several of the leading winemakers in the State, and the information derived from these showed even higher percentages than our own. Probably in the present congested state of the wine trade it is not looked upon as a matter of any great importance.

However, in the future, when there is a greater demand for alcohol, maybe as a motive power, the attention of winemakers and distillers will be drawn to the fact that much of their profit is evaporating from their heaps of marc.

Notes and Queries.

"Bill."—1. Stable compounds found on the farm are not generally considered analogous to those referred to in chemistry. 2. Sorry we can't cater for "clerical" thermometers.

"Dolphus."—Editor considers it advisable to "leave her" (lever) alone when studying practical mechanics.

"W.H.R."—Plenty of "Room" for improvement in that method of putting hames on horses.

"Bluey."—The Government Astronomer thinks it a matter of impossibility to go star-gazing through a theodolite.

"Goliath," *alias* "Tiny."—*Re* your approaching purchase of new leggings, we recommend the use of two potato sacks, but if a further increase occurs we would suggest wool bales.

"Scientific."—1. Shaving chaps' heads with a free addition of red paint is a mere detail in the States. 2. Boarders are generally considered profitable.

"Wal."—Clinical thermometers are not often used for taking the temperature of lamps, except in extreme cases.

Catch Crop.

It.

Was.

Quaint.

The night owl.

Keepers' velveteens.

Use your weight Tiny.

It is nothing marvellous.

Advice at tennis courts given gratis.

Little dance on June 2nd advertised as being A1.

Many thanks are due to the Gawler ladies for their kind invitations for Friday, June 9th.

A FEW LINES FROM THE ANATOMY PAPER OF
A FIRST YEAR.

(By S. P. G.)

I. What is cartilage? Cartilage is a strong gristle like cord found in the body, it is verry strong and flexible. Cartilage can be bent and twisted but bone can't. Cartilage is bent and put into its place again. It is used to pull your toes up and down. It is found in arms, legs, feet, etc., etc.

II. (a) What surrounds the abdomen? The inside of the abdomen is lined with a fibrous tissie, it is there so as to protect the organs inside the abdomen.

(b) Say chief organs in the abdomen? 1. Heart. 2. Lungs. 3. Liver. 4. Intestines.

The heart is in the centre of the abdomen with the left and right lungs each side. The intestines are at the bottom of the abdomen.

III. Describe the functions of the heart. The heart is a force pump, it starts work on the eve of life and keeps going until death's cold hand lays hold upon it.

Veterinary Notes.

(By R.C.J.)

SINCE our last issue we have had a few highly interesting cases to treat in connection with our Veterinary Class, but at the expense of the Farm. For our first lecture of the year, we were proceeding to the Farm with Mr. Desmond to overhaul some ewes that had been sick for some time, when we met "Jack," who reported that the youngsters at Nottles' had taken ill the previous night, and one, a filly, was dead. With all haste, after a glance at the sheep, we made tracks for the scene of the fatality. Arriving there, we found the following:

Bortha's filly (Demijohn's foal?), very much tucked up, breathing hard, quivering, high temperature, and standing with difficulty.

A colt of Yarrow's, age $1\frac{1}{2}$ years, in practically the same condition; and Leader's filly, of the same age, dead.

Mr. Desmond made an examination, and pronounced two very interesting cases of "founder." Proceeding to the deceased filly, two of the students, under the direction of our worthy lecturer, wielded the knives, and started to make a post-mortem examination. After carefully overhauling all the intestines, &c., Mr. Desmond decided that the cause of death was eating crushed wheat, varying quantities of which were found along the intestinal canal. A little sand was present, but not sufficient to do any damage. Both the diaphragm and a part of the intestine were ruptured, but indications proved that this had taken place after death. One of the fore feet was amputated and dissected to get the lamina, which was found to be slightly inflamed.

We then drew our attention to the other animals, which we tried to drive home, but as the only way we could shift them was by "using our combined weights," we gave it up as a bad job, and with great difficulty and much "heave-hoing" managed to get the patients into the shed in the paddock. After making them as comfortable as circumstances would permit, we went home to dinner. Later in the afternoon Mr. Desmond gave them some physic, and left instructions with some of the students as to the rest of the treatment. By the end of a fortnight, after varying hopes, the youngsters were well on the road to recovery, due chiefly to the careful attention of some of the students and the aid of a "water bath."

Barely had we got over the discussions, &c., of these cases before another was reported. On Friday morning, of May 26th, the stablemen found poor old Leader in a very bad state and in great pain. They reported the matter to the Farm foreman, and she was duly removed with great difficulty to a loose box. The symptoms were as follows:—Her body and limbs trembling, and breaking out in a heavy sweat, accompanied by great pain. The mucous membranes were inflamed. Temperature, pulse, and respiration abnormal. She continued from all indications to get worse, so that in the afternoon Mr. Desmond was "wired" for. Previous to his arrival she had been given various drenches, &c., but with no effect perceptibly. The Veterinary Surgeon pronounced enteritis on examination, and gave her the following drench:—*Cannabis indicus*, 3 oz.; aromatic spirits of ammonia, 2 oz.; water, $\frac{1}{2}$ pint. After administering this drench we all collected in the Common Room and discussed with Mr. Desmond the probable cause of the mare's illness and the treatment of similar cases. We decided that she had obtained a feed of wheat by getting out of her stall at night. Towards evening she discontinued to perspire, although the pain did not decrease and breathing became harder. As she was in pain and throwing herself about considerably, some of the students remained up all night with her, taking temperatures, &c., and keeping a good bed of straw under her. Towards midnight her breathing became still harder and more irregular, indicating lung troubles. During Saturday she remained about the same, and the drench given above was administered at intervals. Towards Saturday night she became worse again, and continued to do so, violent spasms of pain coming on at long intervals. Shortly after dinner on Sunday the pain became so intense that she hardly stopped kicking and grinding her teeth for an hour, so it was decided to put the poor beast out of misery, and a rifle was sent for, but before it arrived she gave her last kick and died.

Poor old Leader! She had been a grand old mare, as straight as a die, good tempered, a good mother, and a Briton to work, although a lot of the heart had been knocked out of her. She left an orphan son, who was just being weaned—a fine, well-built little chap, and a great pet of the students. After she had died she was painted with a certain disinfectant to preserve her until the post mortem.

On Monday morning Mr. Desmond came up and made a thorough post-mortem examination himself, explaining different points of interest to us and taking numerous specimens. The result of the post mortem may be summed up as follows:—Firstly, she undoubtedly had obtained a big feed of whole wheat, large quantities of which were found in the intestines. Secondly, enteritis and congestion of the lungs, brain, and spinal cord had set in,

finally causing death. After post mortem she was submitted to the flames. R.I.P.

These two cases, though detrimental to the Farm stud, which is somewhat deficient, afforded great object lessons to the students, so that while sympathising with the "bosses" over their great loss, we must also thank Mr. Desmond for his interesting lectures and demonstrations.

Roseworthy Dairy.

(By C. L. S.)

NO doubt we are all pleased of the fact that our new factory is nearly completed, although we must all agree that the construction of the building and the fitting of the machinery has been exceptionally slow work. The new churn (Concussion) and butter worker—which were built by Messrs. Chenner & Son, of Gisborne, Victoria have just arrived in excellent condition.

It is our intention to have a number of separators of different types to demonstrate the working and manipulation of the various machines. This will be an exceedingly interesting branch of our dairy work as it will give students the opportunity of seeing the construction and working of the various machines, testing their accuracy of skimming, thoroughness of manufacture, ease and accuracy of running, etc., thus enabling them to see and judge for themselves which machine is most suitable for their various needs in future years.

Within the next month or so we expect to have our factory in full swing, producing butter, cheese, and bacon, and demonstrating to students the various methods of manufacture of these products, together with the testing of milk and its products, doing bacteriology, working of a refrigerator, cold storage, and the general management of a butter, cheese, or bacon factory.

With regard to our dairy cattle I believe our dairy herd will compare favorably with most others in the State, although many of our cows are advanced in age. Our young cows and heifers are of good average quality, and some of them will soon be coming on to their work to replace the old "machines" which have done such good service for so many years. Now, with regard to these young heifers, we must be ever mindful of the fact that they are the back-bone of our future success and the mainstay of our future dairying industry. We, none of us, take one quarter the care of the animals that we should. Always give them every care and attention, providing abundant supplies of good nutritious food, good clean water, and shelter from the scorching sun, and cold bleak winds of winter. We can never expect our heifers to be a success at the pail, a credit to ourselves and our dairying industry as

a whole, unless we give them proper care and management, for, never forget that if we stint them when in the growing stage of life we check the full development of their vital organs, which are of utmost importance in a good dairy cow. Always be liberal with them from birth, and do not expect the poor calves to live and thrive, as so many unscrupulous dairymen expect, on a ration of skimmed milk. Nature provides a food for these little animals in the form of the mother's milk, which is perfect in its composition, that is, it contains all the elements necessary, and provides every want of the little frame for the development of all the vital organs and processes until these organs are sufficiently developed to digest and assimilate more bulky and less digestible foods, such as green grass, hay, etc. If we feed our calves on skim milk, thus depriving them of the valuable element—fat—which nature provides to produce heat and energy in the little body, and do not endeavor to replace this fat by some substitute, we cannot expect to build up a sound healthy frame and constitution in our calves, nor expect them to make a success of the important work they are required to perform later in life. Do not be content to allow your calves to drag along on a ration of skim milk, but provide them with a substitute such as cocoanut oil cake, crushed linseed, etc., or one of the specially prepared foods to take the place of the fat extracted by your separator, for, although no food can be prepared equal to the mother's milk, yet "half a loaf is better than none at all." When your calves commence to pick at the green grass they should be provided with abundance of good succulent and nutritious food to enable them to build up and develop a large frame, wide and deep chest, good sound bone and muscle, well sprung ribs, large, square, evenly developed udder, big paunch, etc. By feeding these succulent and palatable foods we encourage them to develop this very desirable point of a large paunch and to be the consumer of large quantities of food, which points are most essential in a good dairy cow. In conclusion I may say that although it is false economy to stint or underfeed your young calves and heifers intended for dairy purposes, yet it is a very great mistake to overfeed them, making them fat, thus making them become lazy, which is most detrimental to a good dairy heifer.

Speech Day.

(By 8.)

AFTER a lapse of several years, an old custom which had dropped out of fashion was revived, viz., "Speech Day." Being favoured by a fine day, the 14th of March saw a large number of fashionably dressed visitors to witness the distribution of diplomas and prizes.

The staff and students were honored by the presence of

the Premier, and several other members of the Ministry. Telegrams were read from some other gentlemen, apologising for their absence, and expressing wishes for the welfare of the place. Prior to speechifying, the visitors visited various places of interest on the farm, and several expressed their admiration at the beautiful sight the garden presented to them.

At 3 p.m. the visitors were requested to take their seats in the main hall, where the distribution of the prizes was to take place. The Premier first spoke a few encouraging words about the progress the Institution had made during the last year, and the methods upon which the farm had been run. He also praised the different members of the staff for the efficient manner in which they had carried out their duties during the year, and upon the excellent results they had obtained in the final examinations, which were on the whole better than those obtained for some years back. The Premier then retired to let his "friend and colleague," Mr. Coombe, discourse on various matters pertaining to the College and agriculture in general.

Mr. Molineux spoke briefly on the same subject, closing by calling for three cheers for "our worthy Minister," the Premier.

The Principal then read the annual report, on the conclusion of which the prizes and diplomas were kindly presented by Mrs. Butler.

The distribution being over, afternoon tea was provided for the visitors, but owing to the regrettable fact that the drag driver was anxious to return to Gawler, people were not allowed any time in which to look over the building or farm, but the extra half-hour was spent in examining posters on the Gawler railway platform.

Appended is a list of prize-winners and third-year diploma students:—

Diploma winners in order of merit: R. Wiese, C. G. Savage, P. H. Pickering, A. C. Jacobi, J. F. Naish, F. T. Cooper, R. H. F. MacIndoe.

Prize winners: III. year's—Gold medallist, R. Wiese; old student's cup, R. Wiese; special (presented by B. Seppelt, Esq.), R. Wiese; agriculture (special), R. Wiese; 2nd in year, C. G. Savage; outside work, R. Wiese. II. years—Silver medallist, J. A. B. Stevenson; agriculture (special), J. A. B. Stevenson; viticulture, H. A. Wilson; 2nd in year, J. W. Tassie; outside work, R. Wheaton. I. year's—Silver medallist, W. T. McLean; book-keeping (special), W. T. McLean; agriculture (special), W. L. R. Donnel; outside work, L. G. Paterson; 2nd in year, R. Baker.

A Farewell Social.

ON March 10th Professor and Mrs. Perkins took an opportunity of saying farewell to the students who had finished their term of studies, including the Third Years (who, however, did not go). The evening was opened in a novel fashion, which began a very pleasant evening. An excellent programme was submitted to the guests, and the items were well appreciated. Songs were rendered by Misses Martin, Haslam, Riggs, Warren, Professor Angus (encored), Messrs. Martin, Heath, Shorter, and Robertson. Musical items were given by Mrs. Lathlean, Mrs. Jamieson and Miss J. Martin (duet). Miss Martin gave a violin solo, and Messrs. Jacob, Lawrence, and Robertson gave a trio, consisting of a flute, violin, and piano.

The programme having been passed through in a satisfactory manner, an adjournment was made to the supper room, where an excellent repast was partaken of.

In the meantime the concert hall was converted into a ball-room, and supper over, the guests returned to the ballroom. Some excellent music by Mr. Robertson soon found the floor covered with couples intent on having a good dance. As the dances proceeded the night passed away, and before many dances were over the guests were preparing to leave.

Before leaving we all joined in giving three cheers for Professor and Mrs. Perkins, which brought a very pleasant evening to a close.

Notes for Student.

SECOND EGG-LAYING CONTEST.

(BY W. R. DAY.)

The second egg-laying competition, which was held at the Agricultural College, Roseworthy, and promoted by the Royal Agricultural and Horticultural Society of South Australia, was brought to a close on the night of the 14th of May, having been conducted for 12 months, which proved to be quite long enough to give some of the competitors more than satisfaction. To some it has been a time of rejoicing and increased business and income; while to others it has been a time of lamentation and bewailing; but in any case it has just proved to all concerned that it is the most profitable to breed fowls from a good laying strain if an egg-producer is required, and not to be under the delusion that anything in feathers is good enough for an egg-laying competition, even if it is held at Roseworthy. The following are the results of the year's work:—

208 bushels bran			
149 " pollard	...	25 bushels oats	
46 " wheat	...	8 " maize	
11 " barley	...	4½ " peas	
12 " Torrefied barley.			

2 bags shell grit, 2 bags oyster shell, 2 bags quartz grit, 1 bag charcoal.

	£	s.	d.
Value of eggs laid (21·671) at average 7d. per dozen	58	7	4
Cost of feed and grit, as above	28	4	2
Profit	30	3	2
Value of eggs per hen	0	6	3
Cost of feed per hen per year	0	3	0
Profit per hen	0	3	3

Notes on Third Egg-laying Competition.

The above competition, like the second is being held under the auspices of the Royal Agricultural and Horticultural Society of South Australia, and held at the Roseworthy Agricultural College; the pens, numbering 31, remaining in the same positions as for the last, which appears to be an ideal spot, situated as it is in a carob plantation (*Ceratonia Siliqua*). The trees being of good growth form splendid shade and shelter for the fowls, and therefore should tend to make their surroundings more comfortable than would otherwise be the case, and thereby help to increase their egg-laying powers, which is the all-important point to make for. The 31 pens are again all occupied with nine different breeds, comprising six hens or pullets of the various breeds as follows:—13 pens White Leghorns, 7 of Silver Wyandottes, 1 of Golden Wyandottes, 2 of White Wyandottes, 4 of Black Orpingtons, 1 of Buff Orpingtons, 1 of White Orpingtons, 1 of Minorcas, and 1 of Black Andalusians, which are a very nice lot of birds, nearly all of them being at about the right age to start in the business of egg production. Although the various breeds are not represented in such numbers as last year, which was 14, I think the present lot are quite able to put up a better record in regard to the number of eggs laid, in which, by the way, there is plenty of room for improvement, as the 21·671 eggs for last year is a very poor display for 12 months laying from 186 hens. If the starting of the competitions, say for one month, could be taken as a guide, I should be quite safe in saying the last year's record would be about doubled on this occasion. It is a far cry to the finish, and plenty of time for a lot of incidents to take place; still I am looking forward for at least an improvement of ($\frac{1}{3}$) one-third on the total, apart from the fact that a much better start has been obtained this year in regard to eggs laid, which, to some extent, can be accredited to the better weather conditions which have

prevailed. Although the yards have scarcely been dry since the birds arrived here, the temperature of the weather has not been so severe on them as was the case 12 months ago, when it was not only wet but very cold and squally for a period of some weeks. The chief factor of better success lies in the fact that a very much better class of bird, taken all around, has been sent to do duty in this competition. Of course there are some here that would not put up a brilliant performance anywhere, but the majority are more of the type to lead one to expect eggs. No doubt the competitions are doing a great deal of good in this respect; they are proving to all that it is quite useless to enter a contest with anything but the best obtainable, and therefore it behoves every breeder of poultry for eggs to go for the most approved laying strain. It is possible to get and to continue to improve on that strain as much as he possibly can, and this appears to be somewhat the case here, as the appearance of the contesting birds is much improved on the general appearance of last year's lot. If this improvement is steadily continued, better results must necessarily follow to all concerned. In the past, experience in egg-laying competitions and the results from the same, has placed the White Leghorn and Silver Wyandottes in the leading positions, but I see no reason why some of the other breeds should not also hold a position at least equal to them as regards laying powers, and certainly should beat them from a utility point of view. Take, for instance, the Black Orpington; this breed can be bred to lay up to an average of about 190 eggs per hen or over, which in itself makes the bird well worth its keeping, besides the fact that it can carry a weight of 6 to 7 lbs. if necessary for the table, and what more can one wish for. The cockerels can be fed up to 10 or 12 lb.; surely this breed deserves more than passing notice. And again, as layers the Minorca—an old breed certainly, but perhaps a neglected one—has proved in the past that it is a breed that should not be despised, but with a little more careful treatment at the hands of the breeder for eggs it should, and no doubt would, come before the public in a much more prominent way than it has done in the immediate past, although the credit to a very great extent rests with the breeder. For the production of a fowl that will lay the largest number of eggs, it is also necessary that the feeding and attention to the bird should be continued with that object in view. This is a question which cannot be answered off hand as a mere nothing, but forms itself into a real study as to what will suffice for one bird to supply the proper nourishment for the body, and at the same time produce the right proportion of substance for the production of the egg, would be excessive or otherwise for birds of a different breed. It is absolutely necessary to first find what are the bird's requirements, and then feed accordingly, so that there be no waste, as waste food means waste cash, and that immediately

goes against the value of eggs laid. The best motto to place on the fowl pen is maximum of value for minimum of cost, and this can best be done by feeding just enough and no more. It is also a very good plan to catch a fowl here and there occasionally and feel for condition, and one can tell at once whether the bird is over or under fed; and at intervals of say six months try the weight of some of them as a safe guide. (I enclose the weights of the various pens of birds as received at the starting of the present competition, viz., May 20, 1905)—and these will probably be weighed again at the end of the half-year, and again at the end of the year, and then a fair comparison can be made as to their condition having been maintained or otherwise. As some defeated competitors in the past have taken the feeding arrangement as a feasible excuse for their non-success, very special precautions will be taken in this direction in future; and with a view to dispel any notions as to the birds being over or under fed, all feed is being carefully weighed and allotted to the birds as follows:

No. Pen.	Breed.	Weight of birds.	Weight of feed per meal.				Owner.
			Mash.	Crushed bone and green feed.	Grain.	Daily total quantity.	
1	White Leghorns	25 lb	17 oz	9 oz	7½	2 lb 1½ oz	Muecke, C. W. L.
2	" "	24	17	9	7½	2 ½ oz	Padman, A. H.
3	" "	24	15	9	6	1 14	Sargentri Poultry Yd.
4	" "	21	15	9	6	1 14	Kia Ora Poultry Yds.
5	" "	27	15	9	6	1 14	Parish, Thos.
6	" "	20	17	9	7½	2 1½	Ontario Egg Farm
7	" "	20	15	9	6	1 14	Von Bertouch, J.
8	" "	15	15	9	6	1 14	Dobbie, Leonard C.
9	" "	20	17	9	7½	2 1½	Briarleigh Poultry Yd.
10	" "	21	17	9	7½	2 1½	Foot, Chas.
11	" "	19	17	9	7½	2 1½	Allowah Poultry Farm
12	" "	24	17	9	7½	2 1½	Kinnear, A. E.
13	Silver Wyandottes	28	18	11	9	2 6	Pirralilla Egg Farm
14	" "	27	20	11	9	2 8	Smith, W. A. E.
15	" "	29	20	11	9	2 8	Brookman, Norman
16	" "	21	20	11	9	2 8	Balfour, John G.
17	" "	29	18	11	9	2 6	Bartlett, D. W.
18	" "	29	18	11	9	2 6	Dobbie, Hector J.
19	" "	32	18	11	9	2 6	Yenda Poultry Yds.
20	Gdn. Wyandottes	33	18	11	9	2 6	Mellor, P. W.
21	White "	30	18	11	9	2 6	Wright, Chas.
22	" "	26	18	11	9	2 6	Gibbons, J. & A.
23	Blk. Orpingtons	30	22	11	10	2 12	Utility Poultry Yds.
24	" "	42	22	12	10	2 12	Wimble, F. J.
25	" "	36	22	12	10	2 12	Krummell, W. F.
26	" "	29	22	12	10	2 12	Francis, Jas.
27	Buff Orpingtons	37	22	12	10	2 12	Laidlaw, R.
28	White "	33	22	12	10	2 12	Brookman, Norman
29	Minorcas	25	18	11	9	2 6	Penglase Bros.
30	Blk. Andalusians	21	18	11	9	2 6	Evenden, W. F.
31	White Leghorns	20	15	9	6	2 14	Dix, H.

Although the quantities and the quality are approximately the

same as was supplied last year, a slightly different system is being conducted in supplying same. The pens have all been dug, and a supply of cocky chaff and litter is scattered about for the fowls to scratch in, and which they appear to appreciate, as in addition to helping to keep them off the damp ground they find some small grain and other seeds by scratching about for them. Their evening meal of grain is also thrown down amongst this litter, thereby giving the fowls exercise scratching for same and preventing them from eating too quickly, and preventing to some extent any cases of crop-bound which might otherwise occur. Feeding and feeding times are as follows :—

7 a.m.—Mash, composed of bran and pollard, mixed with hot water or liver soup sufficiently stiff so as to crumble when dropped from the hand. Proportion, two of bran to one pollard.

12 noon.—Crushed bone and meat scraps, and green feed as follows : Milk thistles, lucerne, pie melon, rape, cabbage, silver beet leaves, etc.

4.30 p.m.—Grain, wheat, maize (cracked), oats, torrefied barley, peas. All food is of the very best quality, of best sample, and nothing sour, or withered, or musty has been given at any time.

Grit.—As oyster shell, quartz grit, charcoal, sea shell, and river sand, equal parts mixed, and so placed as to be always within the reach and kept dry.

Water.—This is supplied in clean earthenware vessels every day and renewed two or three times during the very warm weather. Everything has always been done that can be done to ensure cleanliness and regularity which is the most sure way to keep all in a good healthy condition, which, after all, is one of the very first points of satisfaction to all.



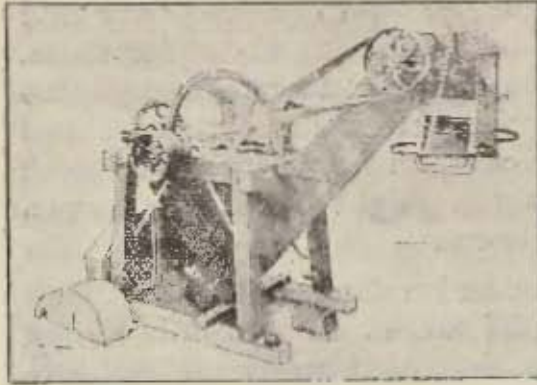
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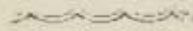
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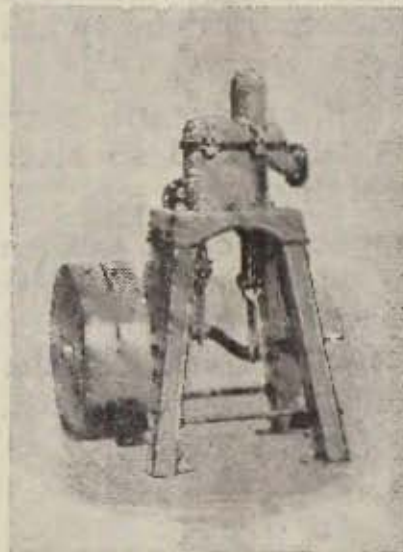
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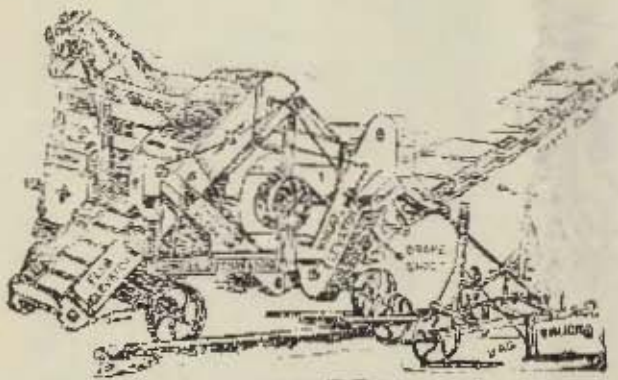
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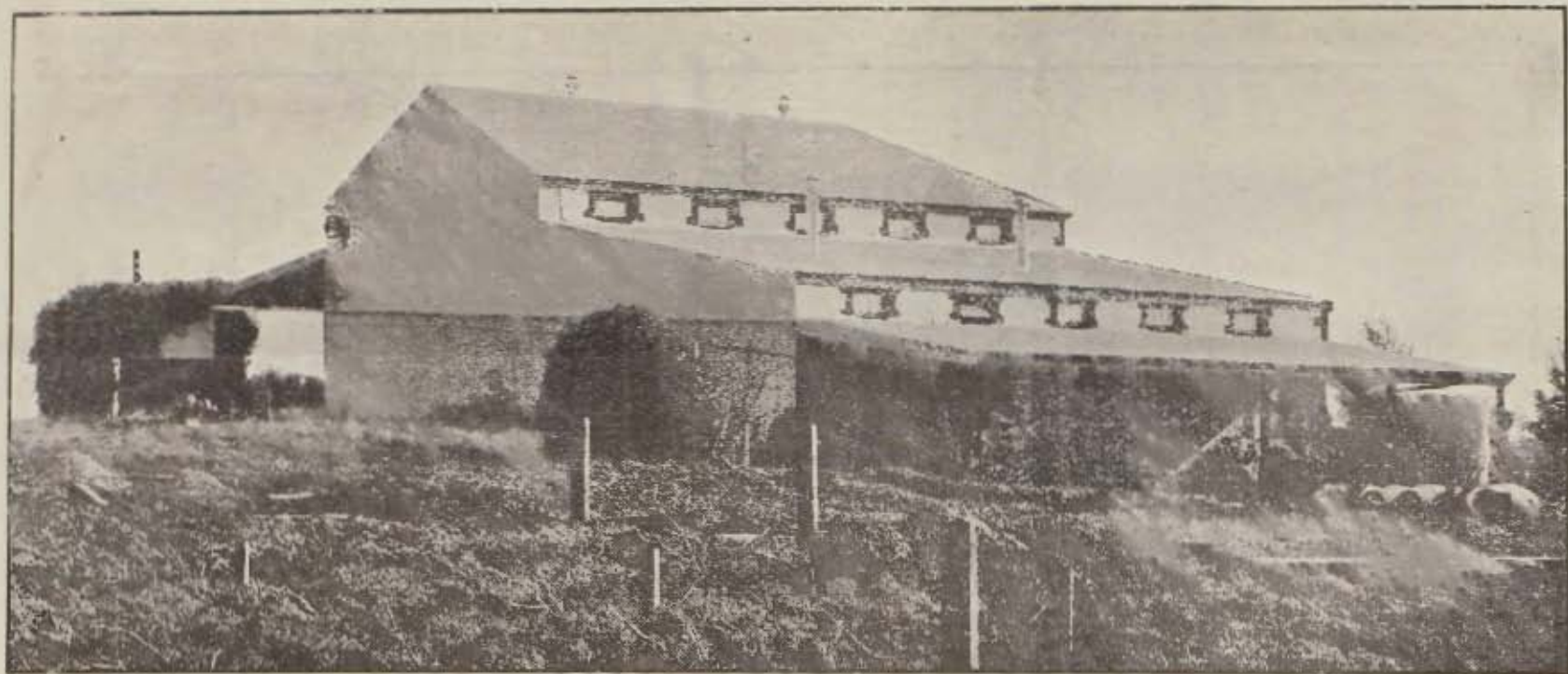
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