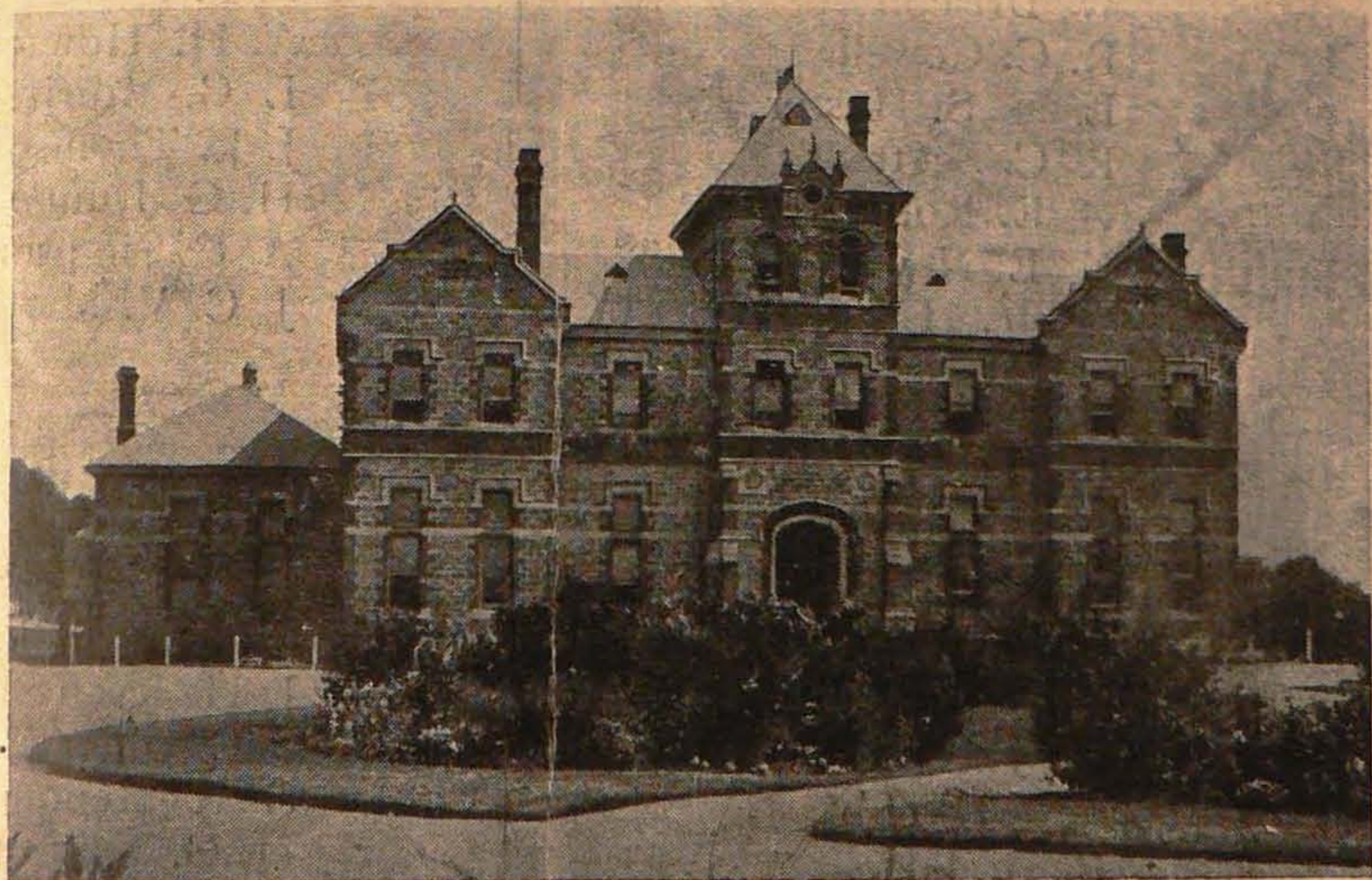


The Student



ROSEWORTHY AGRICULTURAL COLLEGE.

Vol. XIII.,
No 2.

NOVEMBER,
1912.

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THIRD YEAR.

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P. A. Tod
L. D. T. Jarman
D. H. Killicoat
S. C. Vohr

R. C. Hardy
R. R. Bartholomaeus
J. H. Ryan
J. E. Grant
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J. T. Murray
C. A. W. Russell

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R. A. Keddie
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F. O. H. Martin
S. Opie

G. C. P. Prevost
S. H. Reed
W. A. Ross
G. T. Smith
B. M. Taylor
G. C. Walkem

"Et conflabunt gladios suos in vomeres et lanceas suas in falces."

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SOUTH AUSTRALIA.

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THE HON. J. PASCOE.

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*Lecturer on Viticulture and Fruit Cul-
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FOOTBALL TEAM

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1911-12.

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The Student.

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EDITED BY THE STUDENTS.

VOL. XIII. — No. 2.

NOVEMBER, 1912.

Editorial.

In bringing this issue forward we wish to apologise for its somewhat belated appearance, but it was thought that as the ensuing term was a very long one it would somewhat balance matters.

First we wish to thank our Gawler friends for the return dance accorded to us in Gawler. It was quite a success, and remembrances of the good time enjoyed will linger with those students who were fortunate enough to attend.

The excitement of the football season has subsided now and cricket is engrossing our attention, but nevertheless the season 1912 will long be remembered by the R.A.C. students, because we came out on top, that is, we were premiers of the Gawler Football Association. True, it needed any amount of enthusiasm and training to obtain the coveted position, but we are sure the team look back on their great tussles with pleasure, and especially the final match of the season. Perhaps it would not be out of place to mention here that we are indebted to Mr. J. W. Tamblyn, a Gawler gentleman, for a very handsome trophy, in the shape of a silver cup suitably inscribed. Our prospect for the cricket season is a very bright one. We have in our midst J. T. Murray, a player of some repute, and several other worthy additions to our team. We look forward to the coming association matches with keen anticipation, and hope to prove as successful as we have in the football arena. At the present time masons are engaged in the task of laying a new pitch. This will be as good a pitch as can reasonably be hoped for, and in addition the oval has been considerably enlarged, and so in the near future we expect our oval to compare favourably with those of our Gawler opponents.

The annual sports and ball were a great success and particulars will be found elsewhere.

The students congratulate a member of the staff on entering into the matrimonial bonds, and wish Mr. and Mrs. Spafford prosperity and longevity. The disease appears to be infectious for we also wish every happiness to Mr. and Mrs. May. The point of discussion now is who will be the next staff member to succumb? Say nothing, we have our suspicions.

❖

Football.

Individual matches will not be recorded in this issue, but a short summary will suffice. We suffered defeat at the hands of the Centrals in the last match of the round, but this did not affect our position as minor premiers, as we retained the coveted position on percentage, being level with Souths on points scored.

In the first of the semi-finals we were again defeated by Centrals, thus leaving us only our right to challenge the premiers. This right we exercised, and, as everybody should know, we emerged triumphant and secured the premiership. As this has only been achieved once before we feel justly proud of our feat.

The final match was a ding dong game right until the final bell rang, and the issue was doubtful right through. It would be unfair to individualise as the team played a great game together.

Critique of Team.

(By the Captain.)

Mowat (vice-captain).—The best man in the team. Very strong in the ruck and at centre. Splendid mark and kick. He did more than any other player to win the premiership, and we must thank him for sticking to the team when he might have played in higher football.

Murray.—Played consistently throughout the year. The best mark in the team, and a splendid kick. His low passes were a feature of the football for the season. With Mowat made a strong ruck.

Hocking.—Played half back and centre, and showed to great advantage. He was the mainstay of the back lines, very seldom being beaten. A good mark and kick, and a splendid ground player.

Hester.—Played throughout the year on the wing. Very fast and sure. A good mark and kick. A bulldog for work and in the final match figured as one of the best men on the ground.

Killicoat.—A greatly improved player and one of the mainstays of the team. Clever as a rover, but inclined to run too much. Played forward with good judgment. One of best marks in the team, and a good kick.

Henderson.—Like Killicoat a good rover, very sure, always getting his kick, and showing splendid judgment. Placed forward he was rather a disappointment, due to insufficient confidence in himself.

Taylor.—Played consistently at half-back throughout the year, and never knew when he was beaten. A good mark, but a poor kick.

Morrison.—Played in goal with good judgment. Kicked off well, and a good mark. Should try to be less nervous in a tight position.

Webb.—Has improved since last year; good kick and fair mark, but should learn to punt when close to an opponent.

Ryan.—A greatly improved player. A good mark and kick. Rather inconsistent towards end of season, owing to insufficient confidence.

Madeley.—Improved much as the season advanced; used his weight with judgment and considerably helped back lines when he got in form. A fair mark and kick.

Manuel.—Greatly improved player, with plenty of energy which he used to advantage, but at times showed lack of judgment when running with the ball. Good mark and kick.

Howard.—Played well at beginning of season, but slowed down at end owing to his illness. A good mark and splendid kick.

Vohr.—Has been rather a disappointment after last year, but at times played well. Lacked judgment when running with the ball.

Sibley.—Played the latter half of the season, and greatly strengthened the forward lines. A good mark and kick, and very sure when kicking for goal.

Russell.—The most improved player of the team; very unselfish, and very sure when kicking for goal. A good mark and kick.

Hill.—Has greatly improved since last year. A good ruck man with good judgment. Fair mark and good kick, and was greatly missed when unable to play.

Harper.—A good kick and mark, but slow in the field; needs a little more energy.

(By J.T.M.)

Mr. Baker (Captain).—Is to be congratulated on the judgment he displayed in handling the team throughout the season, and our success was in a measure due to this.

Individually he showed splendid form throughout the season and played a very good game. He marked and kicked excellently and with Hill formed a formidable ruck.

Dookie Agricultural College.

Dookie College is situated between the towns of Shepparton and Benalla, on the fringe of the Goulburn Valley in North-Eastern Victoria. It is distant five and a half miles from Dookie railway station, and some 150 miles from Melbourne. Thus, with one mixed train a day, Dookie College is not so conveniently accessible as Hawkesbury or Roseworthy. Approaching from the New South Wales side, as I did, however, the College was still more difficult to reach. The line to Dookie joins the Sydney line some 70 miles South of the College, and to get there by rail would have necessitated my spending a night at Mangalore. I therefore decided to take a cross-country route, and accordingly broke my journey at Benalla and did the 23 miles that separates that town from Dookie per bike.

The country between Benalla and Dookie is very flat and studded all over with dead trees, which give it a very desolate appearance. The land is decidedly on the heavy side, and is devoted almost exclusively to sheep raising. As one approaches the College, however, it becomes more undulating, in fact, some of the College land is steep—too steep to be cultivated. The College farm consists of nearly 6,000 acres, some 1,000 of which are cultivated each year. The rest is devoted to sheep and cattle grazing.

On my arrival at the College I was first introduced to Mr. McDonald, the supervisor of the Orchard and Garden. The Orchard contains some 30 acres of fruit trees of every description, well cultivated and cared for. The Orchard House is large, roomy, and well-equipped. Olive oil making, and the drying, preserving, and canning of fruit are all carried out on a scale sufficient for demonstration purposes, whilst jam-making is quite a large feature, sufficient jam being made to supply the College all the year round. The Vegetable Garden is conducted under the same principle as at Roseworthy.

The Vineyards consist of 40 acres of the various wine and table grapes and currants. The Cellars are large and all on the same level. The bulk wine is stored in 300 gal. casks of the oval shape.

Later in the afternoon I inspected the Dairy and Piggeries. The Dairy is somewhat larger than ours, and at times up to a ton of butter a week is turned out. Usually some 50 cows are milked, part by hand and part by machine, and milk is also purchased from neighbouring farmers and is valued according to the Babcock test. At the present time (April) only 30 cows are in milk. Cheese is made in no great quantity—merely for demonstration purposes. There is a fine water tower and refrigerating

plant attached to the Dairy. The Dairy herd consists principally of Ayrshires. The College also possesses a herd of pure-bred Herefords.

The Piggeries are large and contain some hundreds of animals. Berkshires are the principal pure breed, but Large Blacks and Yorks are also prominent, and cross-breeding is carried out on a considerable scale.

As previously mentioned sheep raising is carried on at the College on a fairly large scale. The flock sheep consist principally of Merinos and Merino-Lincoln cross-breeds, and stud Leicesters are also bred. The fat lamb export industry is catered for largely. For this purpose various English rams—Leicesters, Suffolks, Shropshires, South Downs, Hampshire Downs, etc.—are mated with cross-bred ewes, the most popular lamb being the Suffolk cross. The sheep are fed largely on the natural pasture of the district, but a small area of forage crops—rape, kale—are grown also. The wool shed and drafting yards are conveniently situated, and students shear with both hand and machine shears.

The College kindly gave me a bed for the night, and I then had an opportunity of inspecting the College buildings, and seeing some of the students. All the buildings are wooden, with the exception of the dining room and block of laboratories, which are brick. The laboratories are well equipped in the chemical and physical branches, and bacteriology and entomology form part of the work carried on there. Acetylene gas is installed, with special Bunsen burners, which give a good, smokeless flame, the only objection to it being that the flame is almost too hot. There are several blocks of students' dormitories, something the same style as our own. There are at present 82 students in residence. Until recently it has been a two years' course at Dookie, and new students were admitted both in the March and September sessions, so that there were students in four different stages of the work. Recently, however, it has been made a three years' course, and at present there are the last of the students under the old regulations, who gain their diplomas next August, and the first and second year students under the new regulations. The students seem to have a pretty good time, as at Roseworthy. They play cricket and football with neighbouring teams, and, unlike Roseworthy, they generally prove invincible.

The following morning I inspected the farm buildings. The stable is a long building with a wide race down the centre and the stalls on each side, facing one another. Some little distance overhead, running the length of the stable on each side, is a platform for storing bran, oats, etc., but the stable is open down the centre, to afford ventilation. The chaff house is situated about the centre of the building. The chaff house is filled by an elevator

from the chaff cutter outside. It is a tall building, and as the chaff is removed from the bottom, more chaff comes down to take its place. The bran comes down a chute from the platform above into a bin by the chaff house. A somewhat heavier stamp of draught horse is employed, compared with that at Roseworthy. Other farm buildings include blacksmith's shop, carpenter's shop, implement sheds, barns, tool rooms, etc. Later in the morning I accompanied the farm manager, Mr. Gamble, on his round through the various fields. Seeding was in full swing. Wheat is the principal crop at Dookie, but oats are grown largely and barley to some extent. Pease are grown for hay. In one field two twin-furrow ploughs, a disc plough, a set of harrows, a roller, and a drill were all at work, and following one another in the order named. Mr. Gamble does not believe in encouraging laziness, and accordingly all these teamsters, excepting the one on the roller, were on foot. The drill was sowing wheat, at the rate of 45 lbs. seed and 56 lbs. super per acre, and these amounts are rarely exceeded. The fields are worked in rotations, but the order of rotation differs somewhat from ours. For instance oats frequently follow wheat, but barley generally follows some such crop as rape.

On my return to the College, I was introduced to Mr. Pye, the principal. Mr. Pye is particularly interested in the improvement of wheat, and was intimately associated with the late Mr. Farrer in his now famous employment. He told amusing stories of the ridicule he and Mr. Farrer had to put up with, and how by degrees they convinced the farmers that science was of value in the production of wheat. Hand selection, cross fertilisation, and the grading of wheat are features of the work done at the College. "Wardon" is one of the varieties first produced at Dookie, and is coming more and more into prominence as a useful hay wheat.

On taking my leave Mr. Pye extended a general invitation to any Roseworthy student, who at any time happened to be in the neighbourhood, to come and see him at the College. He was always willing, he said, to help anyone, in any way he could, who was interested in agricultural pursuits, particularly those coming from such institutions as Roseworthy College.

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Obituary.

Dr. James Patrick Maher. For some years Medical Officer to the College.

"A kindly physician, a generous friend, and a true sport."

Died November 9th, 1912.

Farm Notes.

At the beginning of the season it was thought that the crops would be a failure, but owing to the weather and rain which have followed, the yields obtained will prove this supposition to be incorrect.

Of the cereals, Barley is certainly the best, and the crop in Island A, which is 4 feet high would do credit to a better year. The seed plots in Ebsary's A and in Dahlitz are also very good. The crop in Nottle's is fairly good.

The Wheat and Hay crops are very good. The Hay, which was broadcasted in Nottle's B, Grainger's C, 6 A and 6 D is perhaps better than the Wheat, and gives promise of a good yield. Nottle's B and 6 A have been cut and the yield from these should average 35 cwt. The Wheat crops are now fairly good. Island B has improved considerably. The Experimental Plots are very good.

The Oats this year are poor. The Cape variety is the best, but the Scotch Gray is a failure.

The main work on the farm since our last issue has been the breaking up of fallows. No trouble was experienced, and so fallowing was finished in our usual time. The depth ploughed was from 5 to 7 inches, but as we have had a very dry season parts of the paddocks were harder than is generally the case. Daly's, a paddock 150 acres area and which has just been purchased, has been broken up, and a good crop should result next season. In all 480 acres have been broken, and of these 80 acres will be used for experimental work.

The working of the fallows has now been begun. Daly's has been scarified and harrowed, and Flett's is being scarified. Ebsary's B has caused a fair amount of trouble, as the working of it was left too long and the growth of weeds was very thick. The Skim Ploughs have had to be used.

Fields No. 7 A and Pig Paddock A have been sown with the summer crop. These paddocks were both sown with Kale, but were a failure. The paddocks were skim-ploughed in September, and were sown with the following varieties:—

FIELD No. 7 A.			
Area. acres	Variety.	Seed per acre.	Manure per acre.
5	Giant Horsetooth Maize	28 lbs.	1 cwt. Super.
6	Iowa	24 lbs.	1 cwt. Super.
4	Early Ambercane	7 lbs.	56 lbs. Bonedust
PIG PADDOCK A.			
3	Sorghum saccharatum	7 lbs.	56 lbs. Bonedust

The germination of the seed was very good.

Ensilage cutting has been begun, and two of the pits have been filled. The ensilage is being made from the Peas in Field No. 7 B, and it is cut with the side delivery mower. The remainder of the pits will probably be filled with Wheaten ensilage.

Shearing has been finished, but the clip is a very poor one, owing to the season being unsuitable for the sheep to give a good return. The weather was not of the best, and operations had to be stopped on several occasions, owing to rain, before work was in full swing. About 1,600 sheep were shorn; of these 1,400, including lambs, formed the College flock, and 200 belonged to farmers of the district.

A 4-tooth Canowie Merino Ram has been bought for 25 guineas.



Football Trip to Angaston.

On Saturday, August 10th, the football team, accompanied by the "sports" among the other students, journeyed to Angaston. Unfortunately the College team was far from representative, as the two ruck men, Mowat and Hill, were unable to make the trip, and several other players, who must have been on the verge of being "stony broke," seemed to think that they could not afford the necessary fare; but still a number of "youngsters" were given a trial in their place. The Housemaster was in charge of the party, and with him was Mr. Haslett, travelling secretary of the A.S.C.U., who happened to be visiting the College at the time, and who made the trip at the invitation of some of the "wowsers."

As the journey was made per drag and wagonette, an early start was deemed necessary, and consequently thirty odd students left the College soon after eight o'clock on a glorious winter's morning to the inspiring strains of "Hurrah, hurrah, the College are on the ball." Nothing of interest happened on the way to Gawler, where students had to "cool their heels" for about an hour. About ten o'clock the journey was continued to Angaston, passing through Lyndoch, Tanunda, and Angas Park. To most of us this part of the country was quite new, so that all the way interest in our surroundings did not flag in the least, especially as we were passing through some of the most prosperous and beautiful districts of the State. Alongside the road were several orangeries, which contained some very tempting fruit, but unfortunately the owners were working their land, and they did not care to respond to the numerous hints, which we threw out, that oranges "all round" would prove very acceptable.

On arrival at Angaston, soon after one o'clock, we dined well, but not wisely, at the Commercial Hotel, where we were made to feel quite at home. An adjournment was then made to the pretty Angaston Park, where the football match took place.

The play was far from strenuous, and at times was almost ludicrous, particularly when certain prominent players found the ground too slippery to stand up on, and also when our worthy captain was heard to give encouragement to his opponents.

The evening was spent in various ways by different students, but certain ones, for some obscure reason, spent small fortunes in the purchase of articles of haberdashery, which afterwards they did not know how to dispose of.

At departure time not a little excitement was caused by the playing up of the drag horses, and very quickly quite a crowd was watching the manœuvres of the horses, but after considerable delay we eventually took our departure, and arrived back at the College in the wee small hours of the morning.

Everyone was more or less tired out and sleepy, but the unanimous opinion was that the trip had been highly enjoyable and most instructive, and the hope was expressed that it might become an annual affair.



Old Collegians' Association.

From the point of view of numbers it can hardly be said that our Fifteenth Annual Dinner was an unqualified success. Considering the number of old students at the Show, it is somewhat hard to understand why there should be such an apparent lack of interest in the dinner, but it appears to be that each one thinks his personal absence will not matter.

Though regretting the necessity of writing in this strain, I must say that from my point of view, it is most discouraging, and unless some radical improvement takes place in the near future someone else must be found to do the secretarial work. I am prepared to do all in my power to advance the Association, but I ask in return some fair measure of support from its members.

What is it that is required of me? Am I to get hold of each one personally, or conduct personal correspondence with all members in order to keep the financial part of the Association going?

I claim that this should be quite unnecessary, but, if it is productive of anything like a response, I would gladly go to the trouble.

Only a few months ago I spent some evenings writing to those in arrears. With what results? About four replies. Even this number was gratifying in a sense, but a greater response would have been far more encouraging.

I trust that if those to whom I wrote see this they will remember that there is such a thing as common courtesy.

Regarding the dinner, I can understand that when in town the members have numerous engagements which they may desire to keep. This in one way is all right, but why should I and others tie ourselves down to this annual engagement more than all? We invite representative guests to join us, and then, very largely, the host is absent.

However, with all due respect to other more important matters there are many who would no doubt attend, but that arrangements do not suit. Well, the remedy is in their own hands. The Committee cannot even get an open expression of opinion as to how the proceedings shall be conducted.

This year it seems that the hour of dining (7.30) was too late. I grant that an earlier dinner would be an advantage in many respects, but if we desire that, then we must go elsewhere for a room to hold it in. This can only be done at additional expense. At any rate, I hope another year to make some such move.

Despite the small gathering, a very enjoyable evening was spent. The toasts were in the hands of Mr. Geo. Jeffrey and Professor Lowrie, to which Professor Perkins and myself responded.

Mr. Fairweather proposed an informal toast to Professor Perkins.

Our old friend, Mr. Haslam, kindly rendered musical items to enliven the proceedings, as did also Mr. H. Snow, an old student.

It may be of interest to old students, particularly to those who subscribed towards the movement, to know that the marble bust of the late John Ridley has come to hand from Italy. It is intended to procure a granite pedestal locally, and have the whole thing finished for unveiling at Speech Day next March.

The Balance-sheet for the past year is published below:—

RECEIPTS.

Bank balance	£31	8	6
Cash, Secretary ..	3	12	8
Subs. and Donations	32	9	0
Dinner tickets	6	2	6
Bank interest	1	0	2

£74 12 10

EXPENDITURE.

Dinner	£10	2	0
Printing	15	5	11
Cup	4	10	0
Postage	0	17	8
E.S. & Co.	0	7	6
Walter & Morris & Co.	0	4	10
Bank balance	39	7	9
Cash, Secretary .. .	3	17	2

£74 12 10

Audited and found correct,

(Signed) H. C. PRITCHARD.
W. J. SPAFFORD.

Donations and subscriptions are acknowledged from the following:—Professor Lowrie, Messrs. J. G. Ashton, J. Brown, R. C. Pocock, W. S. Yelland, F. L. Phillips, R. Wheaton, H. E. Sibley, A. A. Magarey, A. W. Magarey, E. S. Alcock, W. L. Dickson, and F. A. Wheaton.



The Season.

Harvesting operations have begun in real earnest. Already three of the ensilage pits have been filled mostly with peas from No. 7 B, the rest being lucerne and barley. The hay crops in No. 6A. and Nottle's are already in the stook, and the binders are now working in the King's Red in Grainger's C. The returns of those crops which have been cut are good, the estimated yield of 6A. being about 45 cwt. However, it will be some time before the bulk of the grain crops is in a fit state to be bound and threshed.

At the present time the crops on the whole are looking exceedingly well, in spite of their exceptionally late start, and heavy growths of weeds, and from appearances the yields should at least equal those of last year. Of course, much depends on the weather from now on; a good fall of rain within the next few days would probably ensure a good harvest, most likely adding bushels to the yields of the later wheats, and filling out those which are fast ripening, while many days with hot, dry, northerly winds would certainly have the effect of ripening off much of the grain prematurely.

As would be expected, the oat crops are poor, some plots, notably the Scotch Grey in Nottle's, being utter failures. On the

other hand barley crops, for which the district seems eminently suited, are in their usual good form, and give promise of high yields. Feed is much more plentiful in the paddocks than at the same time last year, and at present much of the stock is doing well on dirty fallows, a feature almost unknown last year, so there is not likely to be the same trouble with the sheep as was experienced last autumn.



The Fair Member of our Number.

Although Roseworthy Agricultural College is restricted to members of the masculine gender, unbeknown to the authorities there exists among us a student who rejoices in the name of "Hag." This implies something not entirely masculine, but as the person has passed into compulsory military training I suppose things are all right. Although the subject is masculine in gender, feminine is the nature accompanying it. She does not compete in cricket and football circles, but tennis is her forte. Tennis is frequently described as an old woman's game, and so that point strengthens our argument. Like many members of the gentler sex she is a firm upholder of mixed bathing, and on one occasion while taking a morning bath in the tank, declined to rise to the surface of the water until one of the students assisted her in the natatorial art. She is a great upholder of intense culture, and possesses quite a number of quarter-acre blocks with which to make her fortune. She is a great hand at bridge, has much spare time, and it was thought that it would be necessary to erect a little wooden hut on the tennis court, and send meals out to her, and so save the trouble of coming in for meals, but matters are not so serious now and the idea was dropped. She does not believe in the "Early Closing" Act, as she is firmly in the grip of aerated waters, and could not exist but for her occasional glass of lemonade. At times you will hear her addressed as "Mum," but I can assure my readers that the title is merely a sinecure.

She is very fond of the company of the young ladies, and will go to any trouble to enjoy their company. Dances are a mere bagatelle, and she has at times taken on the old-time-worn art of rowing. Surely that is proof of her enthusiasm. Her origin is obscure, but a rumour has been circulated that she is quite at home in the shearing shed. Where the point comes in neither mother nor myself can see, and I will leave the puzzle to the readers of this article to discover.

Bible Study.

Probably the second term of 1912 has been the most progressive in the short life of this movement at the college.

Near the beginning we were greatly stimulated and strengthened by a visit from Mr. T. M. Haslett, who is one of the travelling representatives of the A.S.C.U., and was the founder of the Bible study at Roseworthy.

On speaking to him of the desirability of our forming a branch of the Student Christian Union of Australasia, he quite thought we were eligible for affiliation. The A.S.C.U., it should be known, is in organic relation with the World's Student Christian Federation, the largest student union in existence, of which there is a membership of the impressive total of 150,000 students and professors, and which has branches in the Universities of every country in the world.

Naturally we feel it a privilege to be able to belong to this great movement, and so soon sent in our application to headquarters in Melbourne. A model constitution was forwarded, which we were permitted to alter and re-construct according to our own requirements. After having sent in this altered Constitution, with a formal application for affiliation, our qualifications were approved of, and a branch has now been established at the College.

Later on, from the University, came a letter informing us that a Committee of four had been formed there, with the object of lending Roseworthy a helping hand in any way possible. Mr. Arthur Howard, one of the Committee, visited the College on September 7th, and very greatly helped us in the Sunday evening meeting, and gave us many useful hints as to the correct lines on which to conduct our work, now in connection with the A.S.C.U.

The study work has continued with a healthful interest. It was just at the close of the term that we finished the third text book, and now we are commencing McConaughy's "Great Events in the Life of Christ," which seems to be eminently suited for our purposes.

May this movement continue to grow in size and strength and soon be able to prove its usefulness and that in the future it is to play no unimportant role in the life at Roseworthy.

College Annual Sports.

The Annual Sports were held on Friday, July 19, of this year. The day was ushered in with glorious weather. The Oval, owing to the unstinted labours of the Sports Committee, was in excellent condition. The programme was carried out successfully, with the assistance of the staff. The usual handsome prizes were presented by Mrs. Perkins at the close of the sports. The College Cup, presented by the staff, for Champion Athlete, was annexed by J. T. Murray, who also succeeded in breaking L. R. Seppelt's record of 35 feet for "Putting the Weight."

The winners of the various events are as follows:—

100 Yards Champion Scratch.—Murray, Vohr, Morrison.
Time, 10 1-5 sec.

Half-mile Handicap.—Henderson, Hocking, Roberts.

Putting Weight.—Murray, Hocking, Hester. Distance, 35 ft. 9 in.

120 Yards Handicap Hurdles.—Morrison, Tod, Harper.

High Jump.—Murray, Tod, Russell. Height, 5 ft.

Mile Scratch.—Hester. Time, 5 min. 2 sec.

Throwing Cricket Ball.—Murray, Hocking, Russell. Distance, 100 yds. 2 ft. 4 in.

Kicking for Distance.—Murray, Hocking, Killicoat. Distance, 59 yards.

135 Yards Handicap.—Morrison, Vohr, Dunne.

Long Jump.—Murray, Vohr, Hester. Distance, 19 ft. 3½ in.

Sack Race.—Hocking, Harper, Beard.

440 Yards Scratch.—Hester, Vohr, Tod. Time, 57 sec.

Tug-of-War (Town v. Country).—Country team.

220 Yards Handicap.—Dunne, Morrison, Hester.

120 Yards Scratch Hurdles.—Murray, Morrison, Tod. Time, 16 1-5 sec.

Old Scholars' Race.—Mowat, Hill, Baker,

The "Big Four-Thirty."

One of the attractions at the College on Farmers' Day was a working demonstration of an oil-driven traction engine in Number 5B. It was an American engine, called the "Big Four-Thirty," and there are at present only two of them in Australia, the other one being owned by Messrs. Young & Ralli, for use on their large farm in New South Wales.

The machine is claimed to embody many improvements on other oil tractors at present on the Australian market, but its two most striking features are the driving wheels and the ingenious steering attachment. The driving wheels, which are eight feet in diameter, and have twenty-four inch tyres, carry practically the whole weight of the engine, and yet, by reason of these wide tyres it is claimed that the pressure per square inch on the ground is less than that exerted by an average horse on the same area. For loose cultivated land, or for use on sandy soils an additional six inches can be fitted to the tyres to enable the engine to obtain a better grip. Another point about the wheels is the manner in which the power is transmitted through them. The drive is effected by small steel pinions on the cross shaft of the transmission engaging a large master cog on each of the driving wheels; these master cogs are fastened to four heavy flat steel bars riveted inside the tires of the wheels in such a position as to be tangents to the cogs, while several light steel stays passing from the hubs of the wheel to the cogs serve to keep them properly centred. The advantage of this construction is that the power is transmitted direct from the master cog to the rim, instead of from the master cog to the hub of the wheel, and thence to the rim through the spokes as in most other tractors, thus making possible the use of light steel spokes, since they have only the weight of the engine to support. Although these wheels appear to be disproportionately light, the makers state that they have never had any trouble with them whatever.

The steering gear, fitted especially for ploughing, consists of a triangular frame of steel tubing about fifteen feet in length; the base of this frame is fastened to the front axle of the engine, and at the apex is a small wheel, which runs in and follows the last furrow. All the steering required is in turning at the ends, and this is done by simply turning this one small wheel.

The four-cylinder engine develops 50-60 B.H.P. at the pulley, and the makers guarantee that power equivalent to that of thirty horses will be given off at the swing during the lifetime

of the tractor. The whole machine appeals to be well made and well designed, in so far as, whilst fairly compact, all parts are readily accessible. Kerosine is the fuel used, petrol only being required to start and run the engine till the carburettor becomes hot enough to vaporise the kerosine, and it is claimed that the fuel consumption per acre varies from $1\frac{1}{2}$ to $2\frac{1}{2}$ gallons, according to the condition of the soil, and the depth of ploughing.

Two speeds forward of $2\frac{1}{4}$ and $3\frac{1}{2}$, and a reverse of $2\frac{1}{4}$ miles per hour, represent the engine's travelling capabilities. The argument advanced in favour of these low speeds is that an engine cannot be built suitable for both slow work, such as ploughing, and comparatively fast work in the shape of road haulage. Further, if a plough travel at more than $2\frac{1}{4}$ miles per hour the soil will be thrown instead of turned. The general Australian reply to this would be that either American ploughs have some peculiarity in their construction which necessitates their travelling at low speeds, or else the American draught horse is a remarkably slow animal. This was evidenced by the fact that the College teams working alongside the engine were at least half as fast again, while the engine was travelling at its stated speed.

The condition of the soil in the paddock was such as to provide as good a test for the engine's power and resources as would probably be possible on level ground. Heavy rains during the previous week, and even during the trials had left many boggy patches, and pools of water in the numerous depressions.

On Farmers' Day the tractor was made to pull three of C. H. Smith's 8-furrow stump-jump ploughs, which were a rather heavy type of skim plough, cutting a 7-inch furrow. This made a total width of 14 feet, and the average depth ploughed was about 3 inches. Many discussions were heard as to whether each plough would require eight or ten horses, but the general opinion seemed to be that at least 9 or 10 would be required to keep going all day, thereby proving that the powers of the engine had not been over-estimated.

In boggy patches, if the bottom were firm and not too far down, the driving wheels would slip until they got a grip, when the engine would run out, but if sufficient grip could not be obtained mallee rails were brought into service, and placed in front of the wheels. In every case this was effective, and, although the engine was often down a good foot or more, she never once failed to come out with her own power alone. In a tight corner she would occasionally rise to the occasion by lifting the front wheels a couple of feet off the ground, but the final result was

always the same, as out she would come, probably to the disappointment of the sceptics amongst the onlookers.

Subsequent to Farmers' Day trials were carried out, using three of the College ploughs, having a total cut of about 9 ft., and ploughing 6 or 7 inches deep, but this combination was insufficient to cause trouble for the engine. Still later a five-body 14-in. furrow Cockshutt engine gang plough was tried at depths ranging up to 9 or 10 inches, but this plough also was too small for the engine. Finally only two of the Smith ploughs were used, being put down to a depth of between 4 and 5 inches. This combination was used to finish the paddock, and through the timely help of the engine fallowing was finished several weeks earlier than last year.

Owing to the fact that after a few days' work mallee rails were at a premium in No. 5, the engine was extricated from bogs by uncoupling the ploughs from the engine and running the latter forward on to firm ground. The ploughs would then be recoupled by means of a length of cable; after they had passed the bog the engine was shunted, and coupled to the ploughs as before. At times, however, unusually bad patches were missed so as to avoid the trouble of getting the engine out, and a few students had the doubtful pleasure of finishing them up later on.

The method adopted in ploughing on a sufficiently large area is to work in lands, pulling out at the ends; when these lands become too narrow to turn in the engine works down one and up another, and by leaving the ploughs in at the ends it is possible to do the headlands, leaving a patch at each corner of the field unploughed.

One of the advantages of the engine is that being self-steering it is quite possible for one man to attend to both engine and ploughs, thus materially reducing the labour bill. The possibilities in this direction were not demonstrated, as, while the engine was working at least four Jacks and one student were kept more or less busy. It was evident that two men would be required if the ground were very boggy, namely, one to drive the engine, and one to wield the rails.

On the whole, the work of the tractor must be regarded as highly satisfactory, and it always seemed, when on good, firm ground, that the engine was capable of pulling a few more furrows. In all probability the machine would work better on slightly rising ground, where water would have no opportunity of lying about. Most of the farmers who saw the trial ap-

peared to be satisfied that the engine was a success, and a commonly expressed opinion was, "If they can do this much now what will be possible in a few years' time?"

In addition to ploughing the engine is claimed to be suitable for pulling all other forms of farm machinery, including seed-drills, rollers, harrows, binders, &c., in numbers proportional to the power required to work them. It is also provided with a friction pulley for driving stationary machinery, such as threshing plants, &c.

With regard to the possibilities of the tractor in South Australia it is certain that it will be restricted in its use to the new country, namely, Loxton, Pinnaroo, and Streaky Bay, where the holdings are sufficiently large to warrant its adoption, and this for several reasons. In the first place, large areas are required for its successful and economical working, owing to the difficulty of turning in a short space; and secondly, on account of the large capital outlay necessary, not only to cover the cost of the engine, which alone runs into four figures, but also to provide implements suitably constructed for the mode of traction. Further, when used as a stationary engine, the power developed would be far too great for general use on any except the largest farms.



The Big Dance.

This has long been an annual feature which, although postponed until late in the season last year, was this year held on the evening of July 19—Sports Day—in splendid weather, and proved to be as successful as any held previously.

The decorations were again executed by Mesdames Perkins, Laffer, and lady friends, to whom we take this opportunity, though somewhat belated, of expressing our thanks and appreciation. The guests arrived by drags from Gawler during the afternoon in time to see part of the sports—it is a pity that there seems to be no way of arranging affairs so that visitors may arrive earlier.

In the evening Professor and Mrs. Perkins received until 8.15, at which time dancing commenced, and was indulged in till the "wee sma' hoors," but they weren't very small either.

Mr. Laffer once more carried out the duties of M.C. in his usual faultless style, but we were unfortunate in that we were

unable to secure Miss Campbell's services. Setaro's String Band provided the musical section of the programme.

The Library, which is availed of as a supper-room, is always much overcrowded, but this was avoided by utilising a portion of the lecture-room for this purpose.

The evening's enjoyment was brought to a close by the singing of "Auld Lang Syne." Cheers were given for the lady friends who so kindly helped with the supper arrangements and the decorations.

Most of the visitors were accommodated at the College, the drags leaving for Gawler again about 9 a.m., so that the Adelaide train could be caught.

Much of the success was due to Madeley, our energetic dance secretary, and also to Neville, who provided the music for the practices during the preparation of the floor.

Since this is our musician's third year, it is to be hoped—if next year's fixture is to be as successful as this—that someone amongst the future first year's will be able to fill this vacancy.



Wanted to Know

If Demijohn is the dam of Kyby?

If Slippery enjoyed his swim in the septic dam?

What we do in the Chemistry Laboratory?

—From Barty's version—"Chemistry."

If Pussy is going to start an aviary?

Generally Cat(t)s are very fond of birds.

If a dog belongs to the feline tribe?

Why Roy does not like peas in his bed?

If Slippery still possesses his fowls?

If Tailboard still thinks Clown has a foal?

It is Said

That several more licences should be taken out.

That Tommy still holds the record.

That the Scoy Bout is getting worse, and has been advised to see a brain specialist.

That Skeeta often goes to Gawler for a haircut?

That Nigger has thought out a scheme to get a bigger milk yield in the milking exam.

That now Beak has left Bom can hold his own with anyone.

That Puss knows how to butcher birds.

That Fat was got at by Horatio for the best room on dance night.

That Wallaby still hops off his tail.

That we now have amongst us a person with the nickname of Hop Poon Goohey.

That the handplots in No. 7 are coming up well.

That Sheckles knows all about Fricasse-ah-la-Cowsjuice.

That the lady killer has been thrown over.

That Roy knows how to operate on a colt.

That if practise makes perfect we should have some excellent tennis players.

That the tennis tournaments promise to be exciting this year.