

10.3.17.

The Student.



Roseworthy Agricultural College.

Vol. VI., No. 1.

JULY, 1906.

PRESENT STUDENTS.



THIRD YEAR.

W. T. McLean
A. S. Hawker
J. H. Room
W. K. Fairweather
C. S. Robertson
R. Baker
J. W. Crompton
J. G. Sandland
G. J. Snell

F. H. Sband
W. Motteram
C. H. Heath
W. L. R. Donnell
E. Leishman
W. J. Aldridge
C. M. Spicer
W. M. Kay
W. H. Room

SECOND YEAR.

F. K. Watson
S. C. Billinghurst
J. A. Horrocks
W. C. Kühne
E. J. Clarke
R. G. Williams
J. C. Buttfield
A. A. Magarey
O. J. Howard
J. K. Gardiner
F. Packham

A. V. Stephen
N. Walter
J. F. Bagot
F. O. Barritt
H. A. Drakard
M. Dunlop
G. N. Grieve
A. K. Shannon
J. I. Sandford
W. A. Wallas
K. S. Wilcox

FIRST YEAR.

E. O. Brown
G. M. Buchanan
D. A. Byard
W. A. Carter
C. W. Cooke
L. S. Davie
W. J. Goldsmith
C. S. Hall
S. E. Hall
J. R. Hocking
C. Inglis

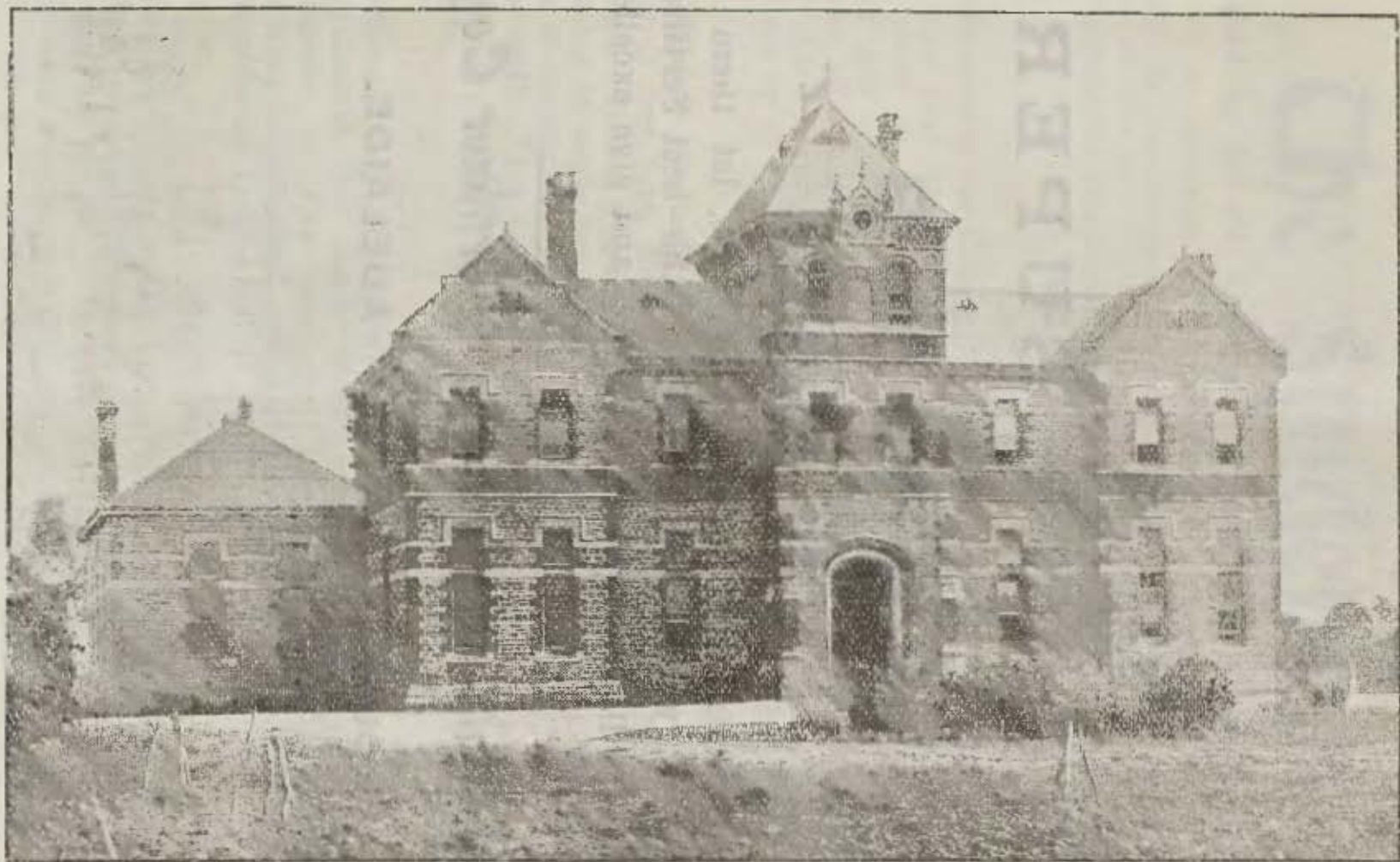
C. H. Knabe
F. J. Kühne
E. L. Orchard
H. J. Reynolds
P. A. Reynolds
P. S. Richardson
E. W. B. Robertson
A. C. Sandland
T. W. Sobels
F. J. Treloar
E. M. Judell

B.Sc. STUDENTS.

L. T. Cowan
A. T. Jefferis

SPECIAL FARM WORK

R. Honey
C. J. Ware



ROSEWORTHY AGRICULTURAL COLLEGE.

PRESENT STUDENTS

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The Student.

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

Vol. VI.—No. 1.

JULY, 1906.

EDITORIAL.

THIS issue of our College Magazine brings us to Vol. VI. Our new year has started with a record number of students, about 31 new members having joined our ranks. The College has been pushed to its utmost to accommodate the students, all available room being occupied. The two rooms in the orchard house, which were burnt down, have been rebuilt and fitted up as temporary bedrooms for third-year students.

ACCOMMODATION.

Owing to the large number of students now attending this College it has been found necessary to increase the accommodation. Hence, a new building is now in the course of erection, containing 24 single bedrooms, 10 x 10, which are to be occupied by the third-year students, and two rooms, 14 x 10, for members of the staff. This building is being put up at the back of the College, the fowl yards consequently have been removed from that side.

SEEDING.

Although the opening of the season was unfavorable, rain having come in time, better results may be expected than were first thought of. The crops up to the present are good, except where some have milted, and where others have been eaten off by caterpillars. Details will be found further on.

POULTRY.

The 1905-6 egg-laying competition is over, and the fowls have been removed. A pen of Faverolles has been presented to the College by Mr. M. S. Hawker. All the College fowls, ducks, and turkeys are doing well. On account of the new building some of the pens at the back of the College have already been removed, and it is probable that more, if not all, will be taken down.

THE stock are all in good condition, but some of the horses are suffering from sore shoulders on account of the heavy work attached to seeding. The lambing has been satisfactory. It was favored with warm weather and plenty of green feed; details concerning it are shown further on. The lambs are in excellent condition, and all the sheep are doing well.

SINCE our last issue there has been a change in the staff. Mr. Jennings has left us, and his place has been filled by Mr. Webb. The students and others wish him a hearty greeting through these columns.

DAIRY.

There has been an addition to the dairy herd by the arrival of two red-polled Angus cows with their calves. All the cows are doing well, and, taking everything into account, the milk yield is satisfactory.

FENCING.

A new lot of fences are being put up. Plots in No. 4 have been fenced off from the rest, with a view to testing the after effects of superphosphate on the natural herbage of the stubbles. No. 5 is being divided into three parts. No. 7 has been fenced into two divisions.

SCHOLARSHIPS.

Nine candidates presented themselves for examination at the College for the scholarships, and on the results the Honorable Minister made the following awards: District 1, L. S. Davie, Greenock; District 2, D. A. Byard, Hahndorf; District 3, P. S. Richardson, Port Lincoln; District 4, F. J. Kühne, Roseworthy; District 5, G. T. Davidson, Roseworthy; District 6, W. A. Carter, Bay Road.

OBITUARY.

We regret to record the death of "Maggie," who after having attended a lecture in agriculture, sitting beside the "Burrd," departed to the shed at the back of the College and drowned all its sorrows and cares of this world by jumping into a copper of boiling water.—R.I.P.



Association Matters.**MARCH SOCIAL.**

THE usual social gathering of old students was held at Ware's Exchange Hotel, Hindley Street, in Show week, March 2nd. Mr. R. H. Martin presided over a fair attendance.

The Secretary explained the method the Committee intend to adopt in reference to the Ridley Statue, and a motion was moved by Mr. Heyne, seconded by Mr. Hubble, endorsing the actions of the Committee.

A lengthy discussion took place on the best method of popularising our annual dinner, and it was suggested that instead of the formal arrangements of past years, a short dinner be held at 6 o'clock, and the remainder of the evening be spent in social intercourse, introducing old and present students to one another, so that the objects of the Association will be more fully realised, and unity and good-fellowship amongst the old and present Collegians will be the result.

A hope was expressed that those who were musically inclined should come prepared to assist in the evening's amusement.

RIDLEY STATUE.

The Committee has been making progress, although slow. The Agricultural Department has promised to help, and with the aid of a hundred or more bureaus which they control, should greatly help to bring the subscriptions up to the desired amount. Messrs. J. Miller and A. Molineux have been appointed by the Council to represent them on the Committee, and with several gentlemen interested in the manufacture of machinery, a strong working Committee can be relied upon.

A good suggestion has come under our notice in the matter of securing funds, that is that we should ask farmers throughout the State to donate a bag or more of wheat to the object. Arrangements could easily be made with some, no doubt all, the wheat buyers to take charge of the bags, and we could sell to each merchant at the day's price. We think this would be a capital idea, and a very fitting way of giving some return to the man who has helped the farmers of this State to bring agriculture to its present high standard.

The idea should commend itself to farmers, and we believe they will be only too glad to deliver from the stripper, or their more up-to-date harvesters, a small tribute to the memory of Ridley, who invented and brought to perfection the machine to which the farmers owe so much to their success.

College Committees.

THE annual elections were held on May 4th, when the following committees were elected:—President, Professor A. J. Perkins; Vice-Presidents, Mr. F. W. Russack and Professor W. Angus; Secretary of Sports, R. Baker; Assistant Secretary, E. J. Clarke; Treasurer, J. G. Sandland; Sports' Committee, third-year J. W. Aldridge, second-year R. Williams, first-year D. Byard; Captain of Football team, A. V. Stephen; Vice-Captain of Football team, J. F. Bagot; Captain of Tennis team, J. A. Horrocks; Vice-Captain of Tennis team, C. H. Heath; Tennis Committee, J. Horrocks, C. Heath, C. Hall; Dance Committee, third-years W. R. Fairweather and W. R. L. Donnell, second-years C. Butfield and J. Horrocks, first-year J. H. Reynolds; *Student* Committee, Editor A. S. Hawker; Staff, third-year W. T. McLean, second-years H. A. Drakard and E. J. Clarke, first-year C. Inglis; Councilmen, third-year F. H. Shand, second-year F. K. Watson, first-year J. Treloar.

Examinations as Tests of Intelligence.

BY "RUSTICUS."

TWO classes of parents readily lend themselves to delusion in respect of the intellectual vigour of their offspring as gauged by examination tests. The first class is represented by the fond father, who indulges boundless exultation at what to him appears to indicate great precocity of intellect in his son—the boy's "splendid success" at the primary, the junior, the senior, the higher public, and other examinations. The other class includes the parent who experiences much anxiety and distress of mind from an impression that his boy, if not absolutely deficient in understanding, is at least much inferior in intellectual capacity to the general average of boys of his own age—an impression formed from his boy's failure to pass even the least of the examinations just named. In each of these cases the hopes and fears of the respective parents are equally unreasonable. It is a fallacy that the power of passing an examination is evidence of an educated mind or of the possession of a well-balanced intellect. Were the object of education nothing more than the cultivation of memory, an examination certificate would certainly attest to the holder having been educated; for examinations, as ordinarily conducted, call into exercise no faculty except memory—the least among the faculties of the mind, a mere store house where matters of fact are garnered.

True education, however, aims much higher and wider than at the cultivation of the memory alone, its object being the discipline and invigoration of the whole mind; and one of the very first principles upon which mental discipline and invigoration depend is that each and every faculty—observation, comparison, reason, imagination, admiration, memory, &c.—should have its due cultivation and consequent expansion. It is common to find a man very deficient in memory, yet strong in literary composition; or a man weak in each of these, yet capable of successfully dealing with the most abstract ideas. It is evident that the educational progress of a youth must be gauged, not by the number of examinations he has passed, the number of textbooks he has committed to memory, but by that portion of knowledge which, by reflection and study, he has made his very own.

The lad who contrives to pass an examination, as most lads do, by the common practice of "grinding" or "cramming" the superficialities of knowledge under the guidance of a "crammer" really attains a false and very dangerous position. His friends, mistaking his success as an evidence of superior intelligence, unduly belaud him until the individual himself becomes conceited and unamiable, and not unfrequently quite indifferent to the prosecution of that study without which the most brilliant talents are worse than useless.

It is with the mind as with fruit. What is prematurely forced seldom possesses the finer qualities of that which matures in due season: while that which is too late in developing may be altogether incapable of ripening at all. Between these two extremes of precocity and incapacity there are happily, many gradations, all adaptable under judicious treatment to the highest and best pursuits and purposes of life.

The condition "under judicious treatment" needs special emphasis, for in the case of the less showy boys, particularly in our secondary schools, such judicious treatment is far too often absent. The usual process is as follows: A certain boy's inability to pass examinations is put down to idleness or indifference; in deference to the parents' wishes strict measures are adopted by the teacher to enforce diligence and application; the unhappy lad is "crammed" against his inclination with mental food which his mind cannot digest, and from which it turns in disgust; and, unless the pressure is removed betimes, the boy develops a fixed and lasting hatred of all studious pursuits, and, being thereafter allowed to follow his own bias, he soon acquires habits of indifference to study, and loses for ever all power of mental application.

This is no mere fancy. Dozens of parents have boys who have been demoralized in this way ; and who can tell how many good men are lost to our State from year to year by our teachers' neglect of the dull boys ? In reality these dull boys should be the objects of the teacher's most assiduous and hopeful care, and the teacher's skill as an educator should be gauged by the measure of his success in this direction. Unhappily, however, the rage for examination stands in the way—an impossible barrier to the progress of true education. Our teachers have found that their skill is estimated by the number of boys they can yearly "put through" examinations ; and, in their eagerness to secure "passes," they repress all exertion on behalf of those who need their guiding help, and devote themselves heart and soul to the "cramming" of such of their pupils as can retain the greatest number of facts and figures and produce them again most readily when called for by the examiners.

No sane teacher would think of invigorating the physical constitution of a boy by surcharging his weak or deranged stomach with food. Would he not rather strive by suitable means to first strengthen the stomach for the processes it had to perform, and then call those processes to full action ? Yet every day we find teachers in our schools and colleges seeking to invigorate the mental constitution of their pupils (that is the object of education) by gorging with facts minds which they should have first strengthened by rational methods of education ! So far from preparing boys for examinations—for feats of memory, of which even idiots are capable—the aims of true teachers should be to create an appetite for mental food rather than to satisfy it ; to awaken curiosity rather than to gratify it ; to foster a desire for reading rather than to impose tasks. How many of our teachers have such aims in view ?

The illustrious Bacon in his time noted and deprecated the consequences of partial distinctions such as are referred to above. He wrote—"A man shall see where there is a houseful of children one or two respected and the rest made wantons ; but in the midst some that are, as it were, forgotten, who may many times nevertheless prove the best." His observations hold good to-day. What, for instance, becomes of all the youthful prodigies that yearly leave our colleges loaded with the praises of head masters ? Is it not true that the talent they displayed in "passing brilliant examinations" is, in many cases, followed by an intellectual torpor ; that the excitement of preparing for many examinations is often the precursor of mental paralysis ? Where in the meantime are the quiet, steady plodders whose abilities at college were less ostentatious, and whose names were never associated with

adulation in the head master's reports? Cannot they be found every day overtaking and outdistancing those who formerly led them far ahead in the intellectual march?

It is true, and consolatory, too, that in most instances mental acquisitions made in a natural way, and at a later period, though they may be less showy, are always the more solid and the more durable. It is, of course, very gratifying to a father to witness an early display of really superior abilities on the part of his son; and it naturally follows that the father indulges the warmest wishes and most sanguine expectations of them; but he is in danger of courting one of the bitterest disappointments a father may know, the disappointment of early promise not fulfilled. The history of mankind furnishes numerous instances, not only of precocious talent wrongly directed, but also of superior mental endowments shattered and ruined by too eager efforts to promote their growth and expansion.

Speech Day.

(By "8.")

THE annual awarding of diplomas and distribution of prizes in connection with the institution took place at the College on Friday, March 23rd. In the absence of the Minister of Agriculture (Hon. L. O'Loughlin), the Premier (Hon. T. Price), presided. There was a capital attendance of parents and friends of the students at the function. At 3 p.m. the visitors were shown into seats in the main hall, where the distribution of prizes, etc., was to take place.

The Principal (Professor Perkins), first read his report for 1905-6. This was followed by the Minister's address. After the distribution of prizes the visitors were entertained at afternoon tea. Time being short, we all thought it wise to pack up, for the session being at an end, and six weeks' holiday were in store for us. The College "drag" appearing in sight caused a great deal of excitement, and with a good old rick, rick, etc., we set off for our long looked for "rest."

THE PRIZE LIST.

Mrs. Price kindly undertook the distribution of prizes, which were awarded as follows:—DIPLOMAS TAKEN—Order of Merit—1, Roy Cecil Pocock; 2, John Tassie, Jun.; 3, James Archibald B. Stevenson; 4, Harold Campfield Wilson; 5, Robert Cooper Jacob; 6, Robert Wheaton; 7, Allan William Magarey; 8, Robert Kerr Lawrence; 9, Stanley James Bottrill; 10, Raymond Martin T. Richards.

THIRD YEAR—1, College Gold Cup, R. C. Pocock (highest aggregate in Diploma subjects); 2, College Second Prize, John Tassie, jun.; 3, Old Students' Cup, R. C. Pocock (highest marks in Agriculture and Veterinary Science); 4, Gold Medal, best outside work (presented by James Martin & Co.), Robert Wheaton; 5, Chemistry Prize, R. C. Jacob (presented by W. R. Jamieson, B.Sc.); 6, Viticulture and Wine-making, J. Tassie (Presented by Professor Perkins); 7, Best Student in Agriculture, H. C. Wilson (presented by Professor Angus).

SECOND YEAR—1, College Silver Medal (highest aggregate all subjects), William Trail McLean; 2, College Second Prize, A. Seymour Hawker; 3, Viticulture Prize (presented by Mr. Buring), William R. Fairweather; 4, Chemistry Prize (presented by Professor Perkins), A. S. Hawker; 5, College Prize, best outside work, J. G. Sandland; 6, Best Farm Diary (presented by Professor Angus), A. S. Hawker and F. H. Shand, equal.

FIRST YEAR 1, Silver Medal (presented by A. L. Brunkhorst), Frederick Keith Watson, jun.; 2, College Second Prize, Stephen C. Billingham; 3, Anatomy and Botany (presented by F. W. Russack), William Kühne; 4, Chemistry Prize (presented by Professor Perkins), Frederick K. Watson; 5, College Prize, best outside work, Alfred V. Stephen; 6, Best Farm Diary (presented by Professor Angus), W. C. Kühne.

On the motion of Professor Perkins, a hearty vote of thanks was tendered to the Premier and Mrs. Price for their presence.

Vineyard Notes.

(By H. E. LAFFER.)

BEFORE dealing with the result of our last vintage it may be of interest to give a review of the rainfall and weather conditions prevailing from March, 1905, to February, 1906. For the second year in succession the hope of a good yield has been completely dispelled by unfavorable weather during the development of the grapes.

The following is a table of the rainfall between the vintages of 1905 and 1906:—March, .08; April, 2.10; May, 2.24; June, 2.07; July, 2.58; August, .87; September, 1.17; October, 2.95; November, .25; December, .00; January, .00; February, .08.

It will be seen from this that up to the end of October the rainfall had been both adequate and well distributed.

Although the bursting of buds was abnormally late it was good, and up to the end of December, it can be safely said, that the vines had never made better growth. With the exception of Malbec the setting was fair to good.

There was some light rain during the first week in November, and then for four months practically no more fell. Again, up to the end of November the weather had been remarkably cool but December set out to eclipse all previous records. January went a good many better, however, and then February made a good bid for supremacy. During January there were twelve days on which the temperature passed the hundred in the shade, and these twelve days averaged 110 degrees. The average for the whole month was 101 degrees in the shade. February contributed eleven days with an average of 107 degrees, and a total average of 97 degrees.

It can be readily understood that vines on a soil of limestone nature, and exposed to such adversity, could not mature their fruit perfectly. The berries did not grow appreciably, and in spite of the excessive heat they did not ripen. Vintage was postponed for a couple of weeks, and even then the densities of Musts were none too high. These ranged from 1067 for Doradillo to 1110 for Shiraz.

The atmospheric conditions at vintage time were all that could be desired. The nights were clear and cold and the days comparatively cool, so that no trouble was experienced in controlling the fermentation. Simple pumping to keep the liquid circulating through the skins was found to be sufficient, and all the tanks ran out quickly.

Instead of 8,000 gallons, which should have been our make, only 2,500 gallons resulted, 300 of this being white.

Carbarnet again showed out as our most reliable variety, and with the exception of Mataro, it stood the heat better than any other.

After pressing, the skins were leached to extract the remaining alcohol, and to obtain further data for the verification of our past investigations. Some slight alterations was made in fitting up the tanks in order to make the handling of the skins easier and more expeditious. False heads of laths were wedged down on top of the skins in order to keep them submerged, and to facilitate the overflow of the liquid. By this means the blocking of the pipes by seeds was prevented, and the water flowed much faster. The rapid flow of water we found a distinct disadvantage, and, on this point at least, we learned something. It was found that on passing from one tank to another, the strength of the liquid showed no considerable increase, this apparently being due to the

fact that instead of slowly taking up the alcohol and the lighter liquid remaining at the top, the mass was rapidly saturated, the spirit being diffused through the whole bulk. Thus after two or three tanks had been tested, it was found necessary to reduce the water supply to a mere trickle.

The process is necessarily slow, but as long as sufficient tanks are available to receive the skins from the press, the time is of secondary importance. The process requires little attention, and can be attended to with the other work. At present we have five tanks, but it is intended increasing the number to nine, and with these we hope to be able to deal with the skins rapidly enough to keep the press clear.

Seasonable work in the vineyard is being pushed on as rapidly as possible. The rains which fell during March had the effect of producing an abundant crop of weeds, particularly in the young orchard. It was, however, too early to plough, and no labor was available for scarifying. Consequently when the ploughs were started in many places the grass was so high as to render the ploughing somewhat difficult.

The worst parts of the vineyard were fed down with sheep, but from experience we know that it is unsafe to have these among young trees. They are particularly partial to the bark of fruit trees, also the leaves of citrus fruits. No doubt the grass ploughed under will answer its purpose as a green manure crop.

The tennis court Carbernet has again been sown with a green manure crop. Instead of peas only, alternate rows were sown with vetches, for comparison. The crop was sown in the first week of April, and at the end of June the peas are over a foot high, the vetches being only three inches. As a rule it is considered that the latter forms the better crop for green manuring, but it is questionable as to whether they can beat the peas in this locality. In order to give them time to rot down they must be turned under before the end of July, and if the vetches are to win they have a lot to make up in less than a month. The seed was drilled in with $1\frac{1}{2}$ cwt. of super. per acre.

An effort has been made to eradicate the Johnson grass from the orchard. It has all been carefully grubbed out, and we hope by constant attention to get rid of this pest in time. It cannot be expected that every bit will be removed the first time. The couch grass in the young orchard is becoming a serious menace, and will have to be dealt with next summer.

In order to provide facilities to demonstrate the drying of fruit, it is intended to graft out some of our vines to provide an acre or so of currants, sultanas, and muscatels. The spot chosen

will be the centre of the well paddock, on some of our best soil, and a piece which can be irrigated conveniently if necessary. The stony patches provided healthy recreation to a number of students for a week or so, and we were able to make a nice piece of road at the back of the wine cellars.

Seasonable work in the cellars has been attended to, such as racking young wines, &c. Pruning is well in hand, and we hope to have this finished in good time.

Many old students will be pleased to hear that The Laird can still draw a plough at a knock-out rate, and is madder than ever. Carboy plods along as usual, and keeps a wary eye on his dignity, while Ranji is maintaining his reputation for bad luck by nursing a staked shoulder. Chief is fat and lazy.

Seeding, 1906.

By "HOPPY."

THE season has not been very satisfactory as regards seeding operations. With cereals the most important point is a rapid and even germination, and this season the rainfall was greatly against this. We got exceptionally heavy rains in March, which is not a favorable sign in this district, as experience shows they are rarely followed by satisfactory April rains. The success of our seeding depends on good April and May rains, and this year the rainfall for the two months was not $1\frac{1}{2}$ inches spread over a long period. In a case like this we are faced with the question whether to sow early or late, as the ground is not in a suitable condition at the ordinary time. We must either sow early or late, so as either to sow dry or when there is sufficient moisture to carry the crop along until satisfactory rains come. The first crops sown this year received a rather severe check, which they will probably find hard to recover from, while the later ones received a fall of rain of about an inch, which will give them a good start. This season over a week of our best seeding time was lost because the ground was neither dry or wet enough to sow.

OPERATIONS.

CATCH CROPS—The east half of Field No. 7 was ploughed up early in March, and sown with Thousand-Headed Kale, at the rate of 1 lb. of seed with $\frac{1}{2}$ cwt. of bone dust to the acre, on April 3rd. The other half of this field was cultivated and sown with crimson clover, and harrowed in.

No. 9—This field was ploughed with Bartle's plough towards the end of March, and about 12 acres on the south side were sown with 10 lbs. of English rye grass, and 2 lbs. of white clover per acre. The remainder of the field was sown with 10 lbs. of Italian rye grass, and 2 lbs. of white clover per acre, and harrowed in.

No. 3—This was also cultivated at the end of March and sown with 6 lbs. of rape, 30 lbs. of rye, and 2½ oz. of mustard per acre, and harrowed in.

GENERAL SEEDING.

FIELD No. 5—Began cultivating on April 9th, and then rolled and harrowed. It was drilled with manure at the rate of 100 lbs. of superphosphate per acre, from April 17th to 23rd. The seed was broadcasted at the rate of 60 lbs. King's wheat per acre; 50 lbs. Cape oats per acre; 10 lbs. black vetches. This was done from May 3rd to 7th, and harrowed in from May 4th to 8th.

FIELD No. 6A—This field, which partly carried a fallow crop last year, was cultivated with Bartle's plough, starting on April 11th: 20 acres along the east fence were drilled with 1 cwt. of superphosphate per acre, and 15 acres along the north fence received the same treatment. On May 1st the 20 acres on the east side were broadcasted with

The other 15 acres were sown with Calcutta oats at the rate of 80 lbs. per acre. The seed was harrowed in on May 4th and 5th.

FIELD No. 8—This field, which was grazed with pigs since last harvest, was ploughed from March 27th to April 3rd. It was then rolled and cultivated and drilled with 95 lbs. of Cape barley and 1 cwt. of superphosphate per acre on May 5th to 8th.

NOTTLE'S—This was scarified from January 27th until April 26th. 27 acres at the west end were drilled with 100 lbs. of superphosphate per acre from April 23rd to 25th. 20 acres were then broadcasted with 1,385 lbs. Petaneille Blanch wheat; 259 lbs. King's wheat; 1,600 lbs. Cape oats; 236 lbs. vetches.

The remaining 7 acres, drilled with manure, were drilled with 75 lbs. King's pickled in 1 per cent. bluestone solution on May 8th and 9th. From May 7th to 14th, 25 acres were drilled with different varieties with 1 cwt. of superphosphate per acre.

The following varieties were drilled from May 9th to 14th:—Guymalaye barley, 5 acres, 360 lbs. seed; French Chevalier barley, 5 acres, 360 lbs. seed; Richardson barley, 5 acres, 350 lbs. seed; Hallel's Pedigree barley, 5 acres, 360 lbs. seed; Prolific barley, 3½ acres, 276 lbs. of seed; College Chevalier, 5 acres, 370

lbs. seed; Premier barley, 3 acres, 220 lbs. seed; Black six-rowed barley, 5 acres, 350 lbs. seed; Cape barley, 5 acres, 370 lbs. seed; Winter Square barley, 5 acres, 360 lbs. seed.

From the 14th to the 25th of May the following were sown with the drill:—Comeback wheat, 3 acres, 206 lbs. seed; Carmichael's Eclipse wheat, 2 acres, 140 lbs. seed; Comeback (College) wheat, 2 acres, 140 lbs. seed; Jonathon wheat, 2 acres, 140 lbs. seed; Yandilla King wheat, $3\frac{1}{2}$ acres, 251 lbs. seed; Richelle de Naples wheat, 4 acres, 280 lbs. seed; Noè wheat, 4 acres, 280 lbs. seed; Rerral wheat, 2 acres, 140 lbs. seed; Towzelle de Provence wheat, 4 acres, 280 lbs. seed; Petanielle Blanch wheat, $4\frac{1}{2}$ acres, 307 lbs. seed; Belotourka wheat, $9\frac{1}{2}$ acres, 669 lbs. seed; Medah wheat, $7\frac{1}{2}$ acres, 523 lbs. seed; Gluyas wheat, 70 acres, 70 lbs. per acre.

ISLAND—This was scarified from January 27th to February 28th. The west end was ploughed with Bartle's plough from April 24th to May 4th. 81 acres at the west end were drilled with 1 cwt. of manure per acre from April 27th to May 4th. 13 acres at west end were broadcasted with 100 lbs. Cape barley per acre from May 7th to 9th.

On May 9th the following were broadcasted:—Rye, 5 acres; 505 lbs. seed; Guymalaye barley, $13\frac{1}{2}$ acres, 1,307 lbs. seed, Calcutta oats, $18\frac{1}{2}$ acres, 1,833 lbs. seed; King's wheat, 31 acres, 3,015 lbs. seed. This was harrowed in from May 8th to 14th.

From May 25th to 29th, 34 acres were drilled with 70 lbs. King and 1 cwt. superphosphate per acre. Also 2 acres along east fence were drilled with $1\frac{1}{2}$ cwt. superphosphate per acre. May 28th, broadcasting linseed flax at the rate of 1 bushel per acre, and harrowed in.



Type of Milking Machine Recommended for the Roseworthy Agricultural College.

BY "A WOULD-BE DAIRY EXPERT."

THE following types of milkers are used, one in winter and summer, and the other in summer only. They are bound to make the work of dairying much easier, doing away with that tiresome and unpleasant labor of milking. Take the one that can be used all the year round first.

Attach to the jaws of the cow an eccentric, 3 inches in diameter. From this leads a wire connected with elastic nipples on the udder, each of which is supplied with an air valve making it an air pump when in motion; when the cow chews her cud the eccentric revolves, and the wire is worked backward and forward like a piston, creating a suction in the nipples. The milk as it is drawn runs in a bucket suspended below, which is emptied at leisure by the student. This is a very simple invention, and can be made by any student having the proper tools.

The summer milker might be slightly more complicated, but when one knows how, is easily worked, and a knowledge of electricity is not necessary.

By fixing an electric motor on the cow's rump, the electricity being generated by a small dynamo attached to the animal's tail, the dynamo starting and charging the motor when the tail is switched. It unhooks the pail and strainer which are hung on the cow's horns, milks the cow, and when stripped replaces the utensils on the horns again.

A small but compact phonograph accompanies the above outfit, which "Whoa" every time the cow moves, and when she kick, a small concern connected with the "———" if the cow still continues to kick s the strainer and lams her on the back till hair as big as a frying pan.

and churn can be obtained for the above outfit out. Both work automatically, and completes the making by working it up in pounds.

As there are a few students here at present who always know of something later than anyone else, and if they know of any later patent than those described, would they kindly let the Editor of the *Student* know as early as possible, so as to give their patent a place in the cow byres.

Tennis Notes.

By "RACQUET."

THE new year for the College opened on May 3rd, when several of the old faces were missed, and a few new ones noticed on the courts. Of the old tennis players who have left us none are so keenly missed as J. A. B. Stevenson, R. C. Pocock, and Jack Tassie, this trio played in a number of matches during last season and did good work for the team.

The best three of the new players who have brought themselves under our notice are C. M. Grieve, S. Hall, and T. W. Sobels. C. M. Grieve plays a very consistent game throughout, and is good on both sides. His backhand play is especially neat. S. Hall, having been an intercollegiate player for Prince Alfred College last year, was expected to show some good strokes. He plays a stronger double than single, because his backhand strokes are very weak, which is especially noticeable in his single. T. W. Sobels is a neat player, and has finished strokes, but is uncertain. This deficiency he ought to overcome with practice.

This year there is an increase in the number of players; this is shown by the number of entries received for the annual tournament, which number 35, and, considering that there are only 68 students here, it shows that tennis is coming to the fore.

We hope in the near future to have a thatch shelter put up between the two courts. The absence of shade causes considerable inconvenience to players and onlookers.

The tournament is progressing satisfactorily. In the singles the third round has been reached, and in the doubles W. R. Fairweather and C. M. Spicer have to play off with C. M. Grieve and J. A. Horrocks in the final. The complete scores will be published in the next issue.

Mr. Suter has kindly offered a racquet for the first prize of the tournament singles handicap. His kindness is greatly appreciated by the students.

On May 12th we journeyed to Gawler, and played Dr. Maher's Club, when we were again defeated by them.

The team is indebted to Mrs. Maher for inviting them in for tea after the match.

We had three new faces in the team on Saturday, the 12th.

The following are the scores:—Dr. Maher and Koch (Sen.) beat Grieves and Horrocks, 9-7; Martin and Fotheringham lost to Heath and Hall, 4-9; Warren and Baily beat Donnel and Sobels,

9-0; Warren and Martin beat Grieves and Horrocks, 9-4; Dr. Maher and Fotheringham beat Hall and Donnell, 9-2; Warren lost to Grieve, 2-7; Koch (Jun.) beat Hall, 7-4; Koch (Sen.) beat Heath, 7-2; Fotheringham beat Sobels, 7-1. Total scores:—Gawler Tennis Club, 7 sets, 63 games; Roseworthy College, 2 sets, 37 games. The play was not so one-sided as the scores would appear to indicate, many of the games being very evenly contested and well fought out.

On Monday, June 4th, we met the St. John's Wood Tennis Club on our courts. Through one or two misfortunes to some of their members they could only bring up seven players, and therefore had to double bank for their last double. Play was commenced soon after 10 o'clock, and continued throughout the day in most enjoyable weather. The home team were most unfortunately without the services of three of their team, which weakened them considerably.

The following are the scores:—

C. M. Grieve and J. A. Horricks	{	Lost to S. N. Bednall and S. H. Chambers	5-9
		Lost to J. W. Packhard and L. Jones ...	5-9
		Beat L. Brown and P. Seddon ...	9-0
		Beat L. Jones and L. Ward ...	9-1
L. Donnel and F. Cooper	{	Beat S. N. Bednall and S. H. Chambers	9-8
		Lost to L. Brown and P. Seddon ...	7-9
		Lost to J. W. Packhard and L. Jones ...	5-9
		Lost to J. W. Packhard and L. Ward ...	6-9
C. S. Robinson and F. H. Shand	{	Lost to J. W. Packhard and L. Jones ...	4-9
		Lost to S. N. Bednall and L. Ward ...	5-9
		Beat L. Brown and P. Seddon ...	9-8
		Lost to S. H. Chambers and S. N. Bednall	3-9
H. Room and R. Williams.	{	Lost to J. W. Packhard and L. Jones ...	0-9
		Lost to L. Brown and P. Seddon ...	7-9
		Lost to S. H. Chambers and L. Ward ...	1-9
		Lost to S. N. Bednall and S. H. Chambers	—

C. M. Grieve lost to L. Jones, 6-7; C. S. Robertson lost to S. N. Chambers, 3-7; J. A. Horrocks lost to L. Brown, 6-7.

Total scores—St. John's Wood, 15 sets, 146 games; Roseworthy College, 4 sets, 102 games.

In conclusion I would like to say a few words as to the play of the team in general. The first two doubles were stronger than the others, not because they received more practise or are superior physically, but simply because they play the net game. Now that the winter is upon us, and few matches to be played, I would strongly advise all players to try and play the net game; it has

been proved over and over again that this play is superior to the back play, so why not play it? If you can play the one, you can play the other, so try and get hold of the net play for the coming season, and the team then will be a strong one.

All tennis players wish to tender their thanks to Mr. J. Bagot for presenting a gold medal to the club to go to the champion single player of the College.

Tares.

Gh!

Mag.

Boxer.

Crown him.

Colonel eyesight.

The grand trio.

Nevis Boxer and Birdie.

The capture of Fronnel.

The pillow was not loaded.

Burrd of a feather flock together.

We are grieved to hear that you are rooked.

Even if it does rain it is not necessary to water the cabbages on Sunday mornings. Hackenschmidt and Bronco please note.

Answers to Correspondence.

"Heckenschmidt."—No, toes are not served up as an article of diet at the college.

"Day V."—There is not such a large herd of milk cows that it is necessary to start milking at 10 p.m. for next morning's breakfast.

"Curly."—*Re* enquiries about Shorthorns—Merino cross. We have had no experience of it here, and can find no mention of it in the encyclopædia.

"Boxer."—Ebsary's is rather too large to be stored in the silos at present on the farm.

"Longun."—When using levers see that the "falcon" does not offer too much resistance.

"Stoker."—If you WILL persist in lighting the fire in the ash pit, you will find it will take much longer to heat the water in the boiler than if you put the fire in the fire box.

"Zillion."—Perfume seems to catch the girls in the Roseworth district. Congratulations. Hope the ring will come in handy.

"Major W."—London—when leaving address please state district, street, and number, as the Professor may wish to find you.

"Willy."—Yes, if you wish to use both hands, the steward will supply you with an extra fork.

"Otto."—Yes, it is safer to get your hair cut at a barber's than singeing it off with an acetylene gas lamp.

Dairy Notes.

BY W.H.R.

SINCE the new year greenfeed has been very scarce, owing to the hot, dry weather experienced during the first three months, and the only greenfeed the cows had was some maize from the garden and some sorghum from No. 6. A very good substitute for green fodder was found in the "silo pits," which were opened during December; the ensilage was of first quality for milk production, being of medium sweetness. It will be seen what an excellent fodder the ensilage proved when according to Babcock tests the milk yielded would have been equivalent to 250 lbs. of butter per month; the milk was given by an average of nineteen cows, including strippers. The last of the ensilage was used on June 16th.

During February four heifers calved, and were a source of amusement to onlookers, and an excuse for rash words to the students who had the breaking in of them; one heifer especially was a splendid high-kicker, and continues at times to indulge in the habit. Two of them on the other hand promise to make good milkers in the near future.

On May 13th two Red Pole cows, with calves at foot, were introduced into the College herd. The calf was taken from one a few days after their arrival, and the mother was christened "Grace" before taking her place in the byres. This cow has given very good results, considering she came off good green pastures on to ensilage and chaff. She has yielded on an average 23 lbs. of milk a day with a test of 4.8%. The other Red Pole has still its calf at foot, no record therefore has been taken, but she promises to equal "Grace" when she takes her place at the bucket.

The cows that need special mention this session are Fidget, Dolly, Did, Myrtle, and Melba. No record was kept when they calved, and during the 197 days that their milk was tested their yield was steadily on the decrease, and at present all five are stripped. The following is their yield of milk and average tests:—

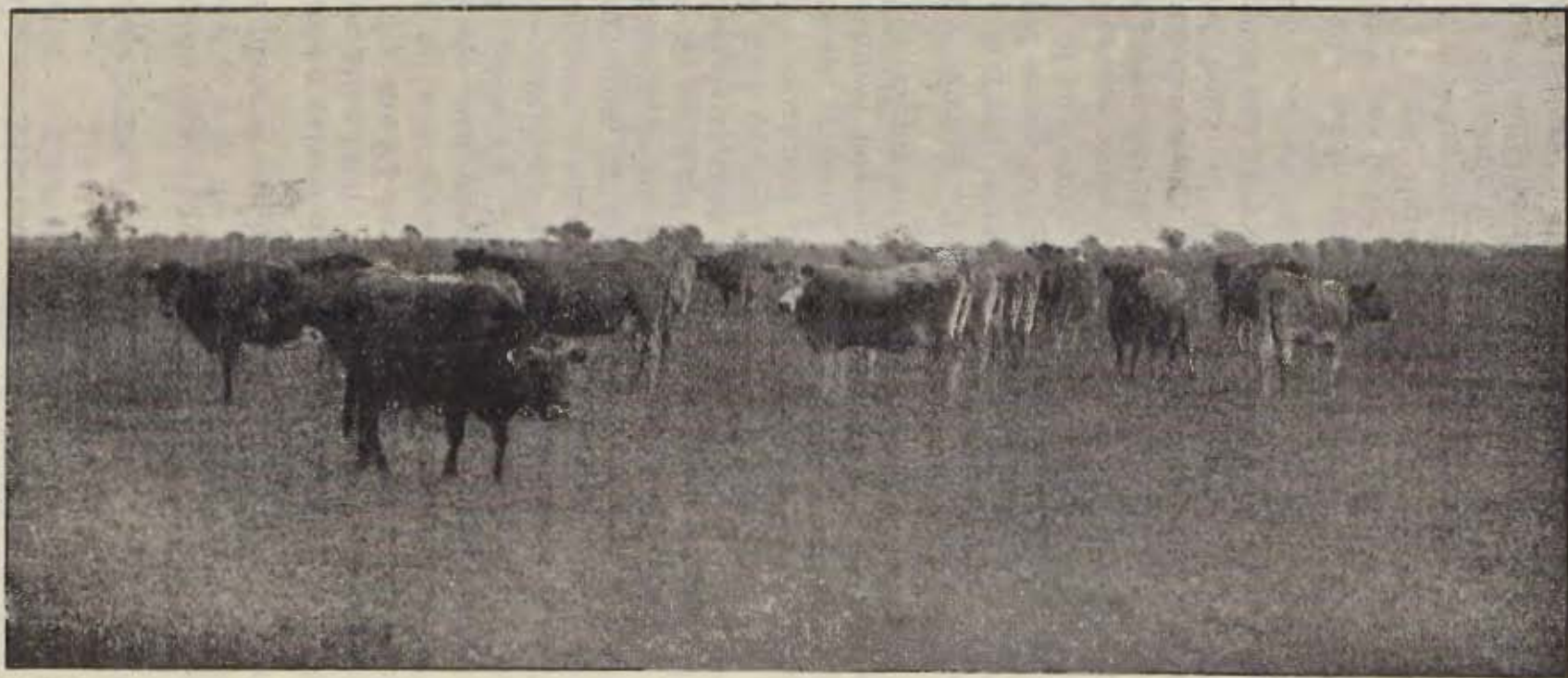
Fidget	3418 lbs. milk.	5.2 %	Average test.
Did	3332 " "	4.8 %	" "
Myrtle	3209 " "	4.6 %	" "
Dolly	3154 " "	4.3 %	" "
Melba	2908 " "	5.4 %	" "

Fidget who tops the list is years old, and was without doubt the best cow in the herd in her day, and we hope to see her take her place at the bucket for some years to come.

Blue Ribbon calved during February, but unfortunately her calf died soon after birth, this cow has proved herself the best in the byres. For the 92 days in milk her yield has been 2938 lbs. of milk, with an average of 4.2 %, or nearly 140 lbs. of butter. The two bulls are again going to be shown at the Royal Agricultural Society's Show in September. The Ayrshire, although grown rather coarse in the bone, should, when in better condition, improve in appearance, and secure a prize. The Jersey is looking very thin, but by Show time he will be in good condition, and should bring the "Pink Ribbon" home again. As there are twelve springers in No. 6, during the next few months the students on dairy may look forward to more cows to milk. There are 7 heifers and 9 dry cows turned out. Under the "Maternal" instinct and care of our worthy instructor the six poddie calves are growing into nice heifers; the two weaklings have grown almost beyond recognition, and no one would credit their lack of development at birth.

FACTORY NOTES.—The Crossley oil engine which gave so much trouble last year was got in proper working order during December, and seems to have got out of the bad habit of stopping in the middle of any work. It proved itself capable of working from 6 to 12 hours without a hitch when the refrigerator was working every day during January and February on the bacon room, in which three pigs were being turned into bacon. As it was the first batch of bacon made here during the summer months it turned out very satisfactorily, and was relished on the College tables.

Cheese was made several times, but owing to the small supply of milk it has to be discontinued. Butter has been made as usual two or three times a week, and has kept up its good quality. The milking machines there was some talk of installing last year have not come to hand yet; evidently the authorities are waiting for a suitable type to be recommended, or till the College herd is enlarged, then we might see one of the hundred and sixty two patents on the market installed in our byres.



ROSEWORTHY AGRICULTURAL COLLEGE DAIRY HERD.

Shearing at R.A.C.

By "BILLOO."

The bell is set a-ringing and the've eaten all the lunch,
 There are one-and-twenty shearers here all shearing in a bunch;
 So stir yourselves, you catchers there, and shove the sheep along,
 The musterers are bringing them two hundred fifty strong;
 And make your kelpie dogs speak up; what trouble there would be
 In Adelaide if wool were late this year from R.A.C.

The man that rung the shed last year is not the ringer here,
 The Jackeroo from Bungaree can teach him how to shear;
 He trims away the ragged locks and rip the shearer goes,
 And leaves a track of white-washed sheep from hind-leg to the
 nose;

It's marvellous how they peel it off with never a stop you see,
 They're racing for the ringer's place this year at R.A.C.

The man that keeps the cutters sharp is growling in his cage,
 He's always in a hurry and always in a rage.

You clumsy tillers of the soil, you turn a fellow sick,
 You reckon you are shearers, you were born to swing a pick;
 Another wether here again, that's two you've caught for me,
 We'll teach you how to tell the sheep now you're at R.A.C.

The fellows picking up the wool enjoy the bowling din,
 They throw the skirters up the fleece, they skirt and throw it in;
 The pressers standing by the wall are waiting for the wool,
 There's room for just a couple more, the bale is nearly full;
 Now jump upon the greasy wool and tramp it merrily,
 Another bale of golden fleece is branded R.A.C.

Poultry Competition Notes.

By W. R. Day.

THE third egg-laying competition held under the auspices of the Royal Agricultural and Horticultural Society of South Australia was concluded at midnight on Saturday, 19th May, 1906, and it is probably the final contest for some time. At least a few notes in connection therewith may be of interest to readers of the *Student*.

The results achieved will show to what extent the various breeds have been improved upon during the short period covered by these contests. A comparison with past competitions shows a marked advance in the percentages in favour of the one just concluded.

As in the past, the number of pens were 31, and they were all fully occupied by 6 hens or pullets of the following breeds:— Silver, Golden, and White Wyandottes; Black, Buff, and White Orpingtons; Minorcas; Black Andalusians; all of which have done their best to uphold their reputations as egg producers, and have come through the trial with more or less credit.

The birds taken right through were of a better class or strain from an egg-producing point of view than those in the second competition; and to this must be attributed the improvement in results.

It will be noticed that White Leghorns are first on the list, and also last; and this shows clearly that one is not justified in expecting a large quantity of eggs simply because the keeper has White Leghorns. It is entirely the matter of strain in the breeding.

A public test is a very severe one, as all the birds are treated alike, but all do not respond equally to the attention given; and it is here that their qualities come to the surface when strain and breeding for egg production becomes clearly apparent.

And although as yet we have not been successful in beating the highest totals put up in some of the other states, I firmly believe that we have fowls in South Australia as good as any in the other States, either as show birds, table birds, or layers. It will be noted that whereas the White Leghorns and other Mediterranean breeds were generally supposed to be spring and summer layers only, they have with us proved all the year round layers.

The White Leghorns easily won the winter laying contest, both here and at Dookie, against the heavier breeds, which again were expected to go off in the summer; but here again the unexpected happened, and the Silver Wyandottes and Black Orpingtons came along in right good style, laying fairly consistently right through. On performances in previous contests, it is to be regretted that the competition did not start at the beginning of April, which would have given us a somewhat longer period during which we might reasonably have expected some of the fowls to be laying; as matters stood, we only got practically ten months good laying, as when the competition starts near the end of May the last two months of the year are generally taken up by the fowls going through their moult, which means very few eggs. For although we occasionally hear of fowls laying right through their moult without interruption, I have not yet seen any myself.

It is pleasing to note that disease of any sort among the fowls was conspicuous by its absence during the contest, and all wore a very healthy appearance right through. Nine deaths were

recorded, accountable to the summer heat. Regularity and cleanliness has been strictly observed at all times; the meals were served three times a day; clean water was supplied, and placed in the shade daily; houses were cleaned out once a week and then dusted with slacked lime, and nests with insectibane.

Grit and charcoal were placed within reach of the fowls at all times; cocky chaff was frequently placed in each pen to induce the fowls to scratch and look for spare grain, and thus indulge in the exercise necessary to general health.

The bill of fare during the contest was as follows:—7 a.m. Breakfast.—Bran and pollard mixed with hot soup on four mornings, and with hot water only on the other three mornings of the week, and occasionally about eight pounds of cooked liver was also added after having been put through the crushing machine. 10 a.m.—Greenfeed, lucerne, rape, cabbage, silver beet or thistles, varied as often as possible, and nearly all was put through the chaffcutter before being fed. 1 p.m.—Crushed bone and meat scraps, about half-ounce per hen. 4.30 p.m.—Grain, chiefly wheat, but varied occasionally with maize, oats, or barley.

The total cost of all feed and grit, charcoal, etc., for the contest was £46 7s. 7d.; average per hen for the year 4s. 11d. Total market value of eggs £98 10s. 11d.; average value per hen 10s. 7d., and a profit over cost of feed of 5s. 8d. per hen.

Comparison of three competitions held in South Australia: -

	1st Magill.	2nd Roseworthy.	3rd Roseworthy.
Number of Hens	156	186	186
Pens Competing	26	31	31
Average per Pen	793	700	1031
Average per Hen	132	117	171
Highest total	1032	1251	1343
Lowest total	292	316	517
Highest monthly total	150	141	151
Deaths of birds	37	5	9
Profit per Hen	2/3	3/3	5/8
Value of eggs laid by Winner.	£4/5/4	£3/14/1	£3/19/8
Average price per dozen	1/0½	8½d.	8½d.
Cost per bird	7/8	3/1	4/11
Total eggs laid	20,630	21,701	31,962

During the contest the pens were visited by 610 visitors from various parts of the State, and all appeared to be well satisfied with the locality chosen and the arrangements made for the carrying out of the competition.

In order to dispel any notions as to the birds being either under or overfed, I weighed the birds on three occasions during the year, and the following are the weights recorded.

Table showing weight of each pen of birds on arrival (1), at six months (2), and at end of Competition (3).

Position.	Breed.	Owner.	lbs.	lbs.	lbs.
			(1)	(2)	(3)
1	White Leghorns	Ontario Egg Farm	20	20	20
2	White Leghorns	A. H. Padman (five hens)	24	24	21
3	Silver Wyandottes	L. C. Dobbie	29	35	35
4	Silver Wyandottes	Piralilla Egg Farm	29	31½	31
5	White Wyandottes	Chas. Wright	30	30	31
6	Silver Wyandottes	Norman Brookman	29	31	31
7	Black Orpingtons	F. J. Wimble	42	41	43
8	White Leghorns	H. Dix	20	20½	20
9	White Leghorns	C. W. L. Muecke	25	26	28
10	Black Andalusian	W. F. Evenden	21	28	28
11	White Wyandottes	J. and A. Gibbons	26	32	30
12	White Leghorns	Sargeniri Poultry Yards	24	22	21
13	Black Orpingtons	Utility Poultry Yards	30	38	39
14	White Leghorns	Briarleigh Poultry Yds.	20	22½	21
15	White Leghorns	A. E. Kinnear	24	25	26
16	White Leghorns	Kia Ora Poultry Yards	21	25	27
17	White Leghorns	L. C. Dobbie	15	21	23
18	Silver Wyandottes	D. W. Bartlett	29	31	30
19	White Leghorns	L. C. Dobbie	19	20	19
20	Silver Wyandottes	Yenda Poultry Yards	32	36	37
21	Silver Wyandottes	J. G. Balfour	21	31	34
22	Minorcas	Penglase Bros.	25	30	26
23	White Leghorns	J. Von Bertouch	20	23	22
24	White Orpingtons	N. Brookman (five hens)	33	35	30
25	Black Orpingtons	W. F. Kruunell	36	38	37
26	White Leghorns	C. Foot	21	28½	25½
27	Silver Wyandottes	W. A. E. Smith	27	32	30
28	Buff Orpingtons	R. Laidlaw	37	38½	37
29	Black Orpingtons	James Francis	29	36½	36
30	Golden Wyandottes	P. W. Mellor	33	33	32
31	White Leghorns	Thos. Parish (five hens)	27	26½	19½

The leading positions were obtained by representatives of the following pens :- No. 6, White Leghorns, with a total of 1343, owned by Mr. T. B. Brooks, Clarendon, can claim title champions ; 2nd position by pen No. 2, also White Leghorns, total 1279, owned by Mr. A. H. Padman, Westall Street, Hyde Park ; 3rd position by pen No. 18, Silver-laced Wyandottes, total 1224, owned by Mr. L. C. Dobbie, Piralilla Poultry Yards, Lyndoch, who also held 4th place with Silvers again, with the splendid total of 1212. It is with pleasure we can number Mr. Dobbie among our old students, and for that fact alone we will wish him continued success.

Another old student, Mr. N. Brookman, was also well represented in the competition with a pen of Silver Wyandottes, also the only pen of White Orpingtons, a really handsome lot, and although hardly used to the climate, did really well in obtaining an average of 180. These birds weighed about six-and-a-half to seven pounds, and being very white and clean in the flesh, they should prove a valuable acquisition to the breeds already chosen as suitable for the table; and we all wish Mr. Brookman every success with his recent importation in the poultry line.

The competitions now being a thing of the past, a move is being made to place the College Poultry Yards and poultry on a much better footing, and from henceforth a great deal more time and attention will be devoted towards supplying the College with poultry and eggs from their own yards.

First Seven Pages from a New Boy's Diary.

By R.A.D.

APRIL 23rd—Travelld to Reseworthy by train in first-class carriage. Was met by privit vegetable cart or "drag," at raleway stashun. Five horses was in the drag—three of them mayors. Didn't think much of jurney out to the Collidge—not enuff houwses on the road to suit my idee of civilizashun. Arrived at Collidge in time for dinner (you bet we was ready for it), but discovered that they hadn't been making allowances for some hungry chaps, and in consiquence there wasn't no buns, so we had to proceed without. After we had dined suffichently we began a general inspection. Had a good look over collidge and footy oval. The large recreeshun ground impressed me very much, espeshally the part I sat on when I slipt and fell on a small bowlder, of which the ground is mostly compoezed. Had a look at dairy nekst, smakked my lips when I cawt site of sum won drinking creem out of test bottels. Then I strolled over to underground tank. Thought the pipes must be verry durty to let so much rubbish go in with the water. It didn't smell like rain water though (someone tried to bluff me they were Epsarry pits). Had a look at wine cellars later on. We smakked our lips again, but terned away from temptashun. Then bell went for tea. After tea I was informed that I was on dairy neckst morning so I retired to rest and slumber.

APRIL 24th—Arose at 12.30 last nite to go up and milk, but someone said we needn't go till 4.30, therefore I seezed the oppertunity to snatch forty more winks. Had to go down underground tanks to-day to clean out rubbish; gave the cows some to

eat; nun dyde yet. Didn't smak my lips then. Had breakfast, and shepperded cows till I felt hungry; then came home to find I was too late for dinner. I was just swelling my chest with pride at being able to awder my own lunshone, when I was asked unpolightly to "wate on meself." Such is the reward for those who saccrifise a whole morning to minding cows when they might be doing something yousful.

APRIL 25th—Had leckchures to-day, Was shown how to keep my cash ackount; but after, I was taken down for thirty bob for kemmistry aperatures, I didn't want a cash ackount--I was stoney-broke. Tried to smoke like the others to-day but it wasn't much of a success.

APRIL 26th - On dairy again! Hope this don't last for evver and evver. Made the fire under the grate when I went to start the engine this morning. The others thought it was a joke: I didn't.

APRIL 27th—Had more leckchures to-day. A master tawt us how to mix hydro-gin-klorride with sumthing else. I didn't think it was verry hard to do. Perhaps I will be able to do that when I'm farming, but I don't expect I will fined much time for it. Nothing important.

APRIL 28th—Thawt we had an urthkwake here last nite. Woke up and found that I was repoezing on the flawer. The furniture wasn't rattling though, so I retired once again after putting on my bed cloes, and repeating softly, "Pax vobizcome." Thought we had a nigger in our room this morning, but it was only me. Some poor koot thawt he was black-leading the hearth-stone in front of the fireplace, but it was my face he was polishing.

APRIL 29th—New boy went home to-day. He said he wasn't ambishous, and that a crown wasn't wurth it. Been on vineyard again to-day. Didn't smell any claret or vodka though. Oh, well! dear diary, diarries is a nuisance, so I will close this week with " Good-bye till neckst."



Murray Bridge Agricultural Experiment Station.

BY H. C. WILSON.

THE object of the above Experiment Station is to test the productive capabilities of the recently reclaimed swamp land adjoining the River Murray, within a mile of the township of Murray Bridge. Speaking generally, the preparation, cultivation, and general productive powers of this class of land are at the present time somewhat elementary.

Although some few private land owners have already reclaimed comparatively small areas, which are now under cultivation and crop lower down the river, the above mentioned swamp land is believed to be the starting point of large Government moves in this direction.

There are extensive areas of land similar in nature to be seen along the banks of river not yet reclaimed, and therefore practically idle and comparatively unprofitable. These swamp lands extend from the "Lakes" up stream as far as Blanchetown, studded in various separate areas along both sides of the River Murray. The nature of the swamp land differs slightly, both in composition and elevation above Blanchetown to the State boundary. At present the mean river level is approximately four feet higher than the lower portions of the swamp already reclaimed, which indicates simple irrigation, but somewhat more complicated drainage, the latter being of utmost necessity on all recently reclaimed land, not solely for its sweetening effects, but also for the removal of the numerous injurious soluble soil salts, which prevail throughout this land, and the gradual firming of this soil, which after reclamation, is exceptionally soft and spongy in nature, thus interfering very considerably with cultivation.

The water supply for irrigation is obtained direct from the river, and regulated by a series of flood-gates, which are built in the reclaiming bank at separate fixed points along the river frontage. An engine and pump are at present situated on this bank for the purpose of removing the drainage water from the swamp to the river. All water passing through the pump is of a distinct saline nature, proving the rapid removal of the injurious soluble salts.

The portion of this swamp allotted to the Experimental Farm is honeycombed with small drains at intervals of three chains. These drains all lead with a gradual fall to a channel inside the main bank; from this point the water is taken by the pump up in to the river.

All drains used to convey surplus drainage water away in the winter months will be utilised as irrigation channels throughout the summer. The clearing of this land when first taken up is comparatively simple, if allowed to thoroughly drain first and become solid, the work being attempted in the winter months before draining is well forward, would prove not only laborious, but wholly impracticable, except upon odd portions of the land which are more elevated and of a firmer nature.

Throughout the whole of this recently reclaimed swamp, there are patches of land comparatively small in dimensions, which are altogether unworkable, because of their low situation and high water level; these portions of land will only be utilised after a system of soil grading is practised. The natural growth to be removed before cultivation, consisting solely of numerous varieties of reeds, is readily ploughed, providing the land is sufficiently solid to support horses at their work. Hand labor, which is the only method of clearing when the land is soft in the winter, is expensive and altogether out of the question, except probably on small ends where the plough cannot readily work. This latter practice of clearing had to be adopted on portions of the soil comprising the Experimental Farm at the outset of the work, because of the softness of the land, but later bullocks were used instead of horses for the removal of the reeds by ploughing.

The soil is of a dark chocolate color, composed of a decayed and decaying vegetable life, intermingled with sediment from the river when in flood, and of considerable depth. Drains and channels have been excavated to a depth of six feet on some parts of the land, and no visible change in the nature of the soil has been noticed.

The land when dry firms and cracks on the surface, rendering cultivation somewhat difficult, but it has been noticed that after the virgin soil is once cultivated nothing again is noticed in that direction.

The crops already planted upon the experimental portion of the swamp show a tendency to be a little backward, influenced by the low-lying ground and the elementary drainage of this newly reclaimed land. Undoubtedly there is an encouraging future to this class of land, and time will prove it to be an ideal spot for the practice of intense land culture, so essential in our thinly populated state.



THE following are exact copies of notes written by a first-year student:—

Of animals he wrote—To the sexes are always distinct male or female.

The functions of roots are— (1) To convale the water aboard the stern branches. (2) To hold the plant imposition. (3) To contain the store of nurragement.

It is a remarkable think that farmers are never classed as bussines men or commercial men, and the reason is probibility found in the fact, etc. Bussines men make it a practise to concord all their transacting in books.

In order that it may be possible for most young planets to grow they must be able to exhale what they do not need.

Of the genus *Asinus*—Only four limbs have worts, and the tail as a tuff of hair at the end, the ass is probibility, where the wild ass of the native, and there is little double that the common ass is concealed of the wild ass, the stuffed members of this genus names zabras are natives of the southern part of Africa.

The Third Years on Tour.

By "Z."

THE third years have been very lucky this year in the matter of making visits of inspection to various establishments in and near Adelaide connected with the agricultural industry.

Since the new year we have made two such trips under the supervision of some members of the staff, on the first occasion spending a day, and on the last, three days in the fair city. On the occasion of our first visit, Prof. Angus kindly undertook to take us to the weekly stock sales; accordingly, Tuesday afternoon, January 16th, saw us all in the train to Adelaide, and after an early breakfast the following morning we proceeded to the sheep-yards. There we examined the different pens of fat wethers and lambs, handling them in approved expert style to ascertain condition of mutton, skin, &c., at the same time estimating for ourselves their probable price, and as the sales proceeded we saw whether our estimates were at all correct or not. Members of the various firms were very courteous in supplying us with all available information, and after seeing most of the pigs sold we adjourned for lunch, having spent a very instructive morning.

In the afternoon Mr. Suter kindly accompanied us to Messrs. Bagshaw & Sons' Implement Factory, where we saw winnowers, chaffcutters, &c., in various stages of construction, most of the work being done mechanically by machinery, thus reducing the manual labor entailed as well as the cost of production. One very ingenious device that attracted a lot of attention was a self-recording " loafers' detective " for registering the exact time each man spends on a job, and we all came to the conclusion that it was just as well for us a similar machine was not in use at the farm. After spending an interesting two hours here, we met Prof. Angus by appointment at Kinderman's, where we all did justice to the liberal afternoon tea to which he generously treated us, after which—home again.

On the 29th, as Mr. Suter had kindly consented to take us over the Government Freezing Works at the Port, we accordingly took the midday train to Dry Creek, changed trains, and after arriving at the Port, made our way at a brisk pace to the Works, and proceeded first to the engine room, where the large ammonia and carbonic acid gas refrigerators were much admired. The engineer kindly explained the principle of these machines to us, and showed us a very neat dynamo; also the brine cooling coil, where the liquid ammonia in the coil expands and abstracts heat from the surrounding brine, which is the cooling medium employed in the coils over the various freezing rooms. These were next visited. Owing to the slackness of the season there was not much to be seen in the way of frozen lambs, only a few hundred being left, there being accommodation however for about 80,000. We had a good demonstration of the magnitude of the export trade in the crates of frozen bunny, eggs, poultry, and boxes of butter piled from floor to ceiling in several rooms. In the butter room Mr. Suter explained to us the various points in the " get up " of export butter, and showed us examples of good and bad packing. In the cheese room the long rows of chesses looked very appetising. Here Mr. Suter intends to demonstrate the improved effect on quality and texture of cheese by slow maturing at a low temperature, as compared with quick maturing at a high temperature such as is carried out in most factories. Leaving these frigid regions, Mr. Suter then sampled a few cases of butter, pointing out their respective merits and demerits, after which we returned to the city for the night.

9.30 the following morning found us all at the Sewage Farm, where we were met by Mr. Hack, who kindly conducted us around. Several fodder grasses were examined with interest, as also was the live stock on the farm. Three pits of chaffed sorghum silage were very favorably commented on, being sweet and in good

condition, and very much liked by the stock, which fatten readily on it. A hurried look over the Co-operative dairy and herd completed a very interesting morning.

After lunch Mr. Suter accompanied us to A. W. Sandford and Co.'s establishment, where, under the direction of Mr. Wallace Sandford, we inspected the Alfa refrigerators and the cool rooms on the ground floor. The underground storage rooms were also a source of interest, there also the packing of eggs for export is carried on with remarkable skill and rapidity, every precaution being taken to see that each egg is fresh and free from cracks before being packed. Next we visited the churning room upstairs, where six large churns are constantly in use, each capable of churning half a ton of butter at a time. The whole process from the receiving of the cream to the printing, wrapping, and packing of the butter for local sale or export was followed with interest. This closed the proceedings for that day.

Wednesday morning at 7.30 we all met Professor Angus at the saleyards, and had a look over the different lots of sheep. Our thanks are due to Elder, Smith & Co., who very generously treated us all to breakfast at the Newmarket, after which we returned to the yards and saw the different lots under the hammer.

After a hurried lunch we proceeded to the Glynn by tram, accompanied by Mr. Quinn, and after a brisk walk of a mile or so arrived at Ellythorp, where Mr. Robson met us, and under his guidance we inspected the different varieties of trees, not forgetting to sample the fruit at the same time. In the packing house the process of grading the fruit by machine was seen, also the whole process of canning, which was followed with great interest, from the cutting of the fresh fruit to its sterilization by boiling, and then the final sealing up of the tins. After refreshing ourselves with some luscious peaches, and thanking Mr. Robson for his kindness, we finished up with a visit to Mr. Wicks' nursery, and Messrs. Pitt Bros.' gardens, caught the tram at Payneham, and finally reached home thoroughly tired out, but satisfied at having spent a most enjoyable and instructive trip for which many thanks are due both to the members of the staff who accompanied us, and also the different gentlemen whose establishments we visited, who courteously supplied us with all available information, and did everything in their power to make our trip an enjoyable one.



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