



The Massey-Harris Harvester.

The Student.

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of Past and Present Students.

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EDITORIAL.

THE last session of the year is now nearly completed; third years are working hard for their diploma exams., all are preparing for some finals. It is with mixed feelings that the long holidays are begun, for with the return to college many well known faces will be missed, and Roseworthy will not seem quite the same again.

In the face of the late dry season expectations as to the result of the harvest did not run very high, but on the whole the outcome of the year's work on the farm was more or less satisfactory. The exceptionally heavy rains toward the close of 1902 proved of great benefit to the vineyard, however, for while in November the chances of even a fair yield of grapes appeared unlikely, the December showers fell just at the required time, and now a good vintage is practically assured.

The year 1903 has been predicted to be a wet and good one. Perhaps at last the drought that has so long ruled in this state is to come to an end, and South Australia is to embark on a series of prosperous seasons. It is sincerely to be hoped that in the corresponding issue of this Magazine next year the farmers may be said to have turned the corner, for if pluck and endurance be the price of good fortune they have certainly more than paid for success.

Our Frontispiece.

WE are indebted to the proprietors of the "Advertiser" for the loan of the block with which we produced the frontispiece. It represents the Massey Harris Harvester, which was the successful machine at the Field Trial held at Smithfield last November, under the auspices of the Royal Agricultural and Horticultural Society, and winner of the gold medal. As this is the first season that the Massey Harris harvester has worked in S.A., it speaks

volumes for the skill of this British company's mechanical staff that such a perfect machine should be sent direct from its Canadian factories to the harvest fields of Australia. Out of 500 points the judges awarded this machine 471 $\frac{1}{3}$, being four above the second machine. It has a steel frame and roller bearings, which account for its lightness of draught, both of which we recognise as important points and of great advantage to the farmer. We congratulate the local agents, Messrs. Clutterbuck Bros., Hindley-street, on their success.

Warning.

Please note how this "Student" is addressed to you, and if in *red ink* take the hint that your subscriptions are in arrears, and the sooner they are paid up the better it will be, both for your own and the Secretary's sake.

We do not wish to lose any of those who have been connected with the Association, and now that members get the "Student" without extra charge it should be a greater encouragement to subscribe. We wish to increase the circulation of this small paper, and that can only be done by those who take it now, continuing to support it, and at the same time endeavoring to get others who are interested in agriculture and the College to become subscribers. Now, if you have not paid your subscription for the year, then send it along, and if you are not a subscriber then become one at your earliest opportunity. Subscription to the Association, including the "Student," 5s. per annum; to the "Student" only, 2s. 3d. posted.

March Social Gathering.

As usual we intend having a social gathering of old and present students during the March Show week, and we hope to see more present at this meeting than last year. Past students should make this gathering a general meeting of old friends. The March and September Shows are the only times when we can expect to get a few of the old boys together, and all should try to make it a success, and when coming down to town keep one night for the company of those with whom were spent many happy days at the College.

The Secretary will not send out a circular *re* this meeting, so accept this notice and try to let the Secretary know if you will be present. To be held at 8 p.m. on Friday evening, March 6, at Ware's Exchange Hotel, Hindley-street.

Telephone to the College.

Another attempt has been made to connect the College with Gawler by telephone. It would prove very useful in case of accident, and be very acceptable to many of us whose parents and

friends are connected with the Exchange in Adelaide. A small fee charged to the students for the use of it, say 3d. each time used (no time limit) would greatly relieve the Department of the little expense that the connecting will incur.

Mr. H. J. McDougall.

The continued article supplied by Mr. H. J. McDougall relating to his experiences in the unique trip through the "Abandoned North-West Runs" comes to a conclusion in this issue of the "Student." Comparatively little is known to most of our readers of this portion of the State, and our old collegian's 400 mile journey has proved so interesting that we are sorry to read the words "The End."

The Rainfall.

The total rainfall for the year 1902 at the College was 11.69 inches.

COLLEGE MEMS.

By "P."

Nothing of a startling nature has happened since the last earthquake, though changes of a different nature will very soon take place.

Barossa is being good enough to give us a permanent (at least we hope so) supply of water. By its means shower baths will be accessible any time, instead of the tub or pump. By the time this goes to press all the pipe service will be laid on at the College. There are three 2-inch mains leading in from the road. One goes through the well paddock up to Professor Towar's house, the second leads to the College itself, and the third is laid up to the farm. The water will supply a great want, and will also save a good deal of water-carting during the summer months.

The food row at the College has had two very good effects. The first is a marked improvement in the tucker itself, and the second, if not more important is very nearly so, to wit, the building of a slaughterhouse and hanging-rooms, which will be done shortly.

All speculations are now tending—as is usual at this time of the year—towards the probable length of the vintage and the annual holidays. The students have been endeavouring—as is also usual during this month—to shorten the vintage as much possible by a practice known here as "ampelography," which

goes hand in hand with grape *testing* (or do you spell it with an "a"?), which of course needs no explanation, being quite simple to follow.

The crops (hay and wheat) were exceptionally poor all round this year. The lack of sufficient moisture may be attributed as the cause of most of the failures, but in Dahltz and No 7 late fallowing had as much to do with it as anything. A detailed account of the yields, manures, &c, will be found in another part of this issue.

The fellows are settling down now to work in earnest for the finals next month. A few who were "collar proud" after the holidays are realising that they've a bigger thing in hand than they imagined. So they have, especially where Theory Chem. is concerned. A dear, sweet subject that, and one nearly every man raps hard going over, not a few punching a panel out.

It has been suggested that if Barossa had been laid on beer instead of water at the College it would have been better. Decidedly it would have been more interesting for perhaps the first quarter of an hour after the meters were turned on, especially if it was anything over 100° F. in the shade, but I think that probably after that quarter of an hour perhaps a good many water-jugs and other large holding utensils of the same stamp would be broken, and incidentally anything else for a quarter of a mile around. Of course this is all conjecture. Perhaps some very interesting results could be obtained with a camera on the occasion, this of course supposing the operator to be a strict teetotaller.

Strolling through the building casually, a stranger would no doubt be very puzzled as to the meanings of the various appellations he couldn't help hearing. I don't mean the usual Roseworthy words, because of course he'd be so used to those that he would either not notice them or would hail them as old friends and a connecting link between himself and the student inhabitants. Of the building he is visiting however, as this is beside the question, we won't enquire too deeply into it. Turning down an interesting corridor, he is accosted by a wild bull-like voice—"Hey! is that you, Donks?" Naturally he retreats. Downstairs faint voices are wafted up through an open window. The fellows are out of lectures and are going out to cricket. "Hey! Boyangs, have you got the ball?"

"No, Piggy and the Rooster are bringing out the ball and bats."

"Is Spooof coming out?"

"Yes."

"Pointer and Jackeroo?"

"Yes."

"Where's Strawberry?"

"Oh, Binks wants him to clean his bike!"

The speakers are out of earshot, and the visitor is left with a confused idea of a jumble of words, half of which he has no idea of the meaning, and the other half relating to cricket.

We regret having to report the rather serious illness of one of our fellow-students, P. Knappstein, who is at present suffering from rheumatic fever. Let us take this opportunity of wishing him a speedy and safe recovery.

FARM NOTES.

Again another harvest is finished at the College, and the results were fairly satisfactory considering the dry season we had. The wheat plots at Ebsary's, fields B and C, were harvested with strippers and winnower, with the exception of the plots Warwick, Jerkin, Gluyas, and Medeah, which were bound and threshed. The yields in these two fields were as follows:—

Variety.	Seed per acre.		Yield per acre.	
	Lbs.		Bush.	lbs.
Early Purple Straw...	78	...	8	7
Bearded (College Selection)	64	...	11	16
Californian Purple ...	49	...	6	48
Fan ...	65	...	10	59
Smart's Pioneer ...	63	...	10	59
Neumann's ...	64	...	9	12
Warwick ...	68	...	5	58
Jerkin ...	71	...	7	44
Gluyas ...	70	...	9	8
Purple Straw ...	66	...	5	11
Medeah ...	72	...	6	42
Majestic ...	75	...	5	31
Marshall's No. ...	65	...	3	24
Leak's Rust Proof ...	69	...	8	8
Tuscan ...	52	...	4	0
Dart's Imperial ...	52	...	8	32
Defiance ...	55	...	7	54

The average yield per acre for these two fields (B and C) was 8 bushels 18 lbs. This low yield is partly explained by the fact that some of the seed did not come up at all, and some that did come up was smothered by weeds. The germination was so bad in the plot of Marshall's No. 3 that it was ploughed up, and College Selection and Tuscan were planted. The Tuscan yielded 12 bushels 49 lbs., and the College Selection 12 bushels 3 lbs. per acre, thus showing that the later sown did better.

In the manure plots, drilled versus broadcast, and where the different quantities and brands of manure were tried, the results were more satisfactory than in the wheat plots. In the test of broadcasting v. drilling, which was carried out in field A, the broadcasting showed the best result. The results were:—

MANURE AND SEED DRILLED.—Seed, 63 lbs. per acre; manure, 2 cwt. per acre; yield, 10 bush 33 lbs.

MANURE AND SEED BROADCASTED.—Seed, 65 lbs. per acre; manure, 2 cwt. per acre; yield, 12 bush 39 lbs.

The wheat used was King's Early.

The quantitative manure tests were carried out in the same field, and the wheat used was King's Early. The results came out thus:—

	Area.	Seed.	Yield.	
No Manure	1 acre	72 lbs.	8 bush.	19 lbs.
Alkali Super. 1 cwt. per acre	2 "	63 "	9 "	0 "
" " 1½ "	2½ "	78 "	10 "	6 "
" " 2 "	8½ "	63 "	10 "	33 "

In noting that the no-manure plot gave 8 bushels 19 lbs., it should be remembered that the field was cropped and heavily manured two years ago, and a large proportion of residual manure is probably represented in this year's no-manure result.

The manure variety tests were carried out in the same field, fertilizers being entirely phosphatic. The wheat used in every case was King's. Dressings of 2 cwt. of each manure was applied. The results are as follows:—

Manure	Area.	Seed per acre.	Yield per acre.	
			Bush.	Lbs.
Lion Superphosphate ...	1 acre	67 lbs.	13	43
Adel. Chem. Works—				
Super. B	2½ acres	68 "	12	50
Superphosphate ...	2½ "	69 "	10	49
Wheat Manure ...	2½ "	64 "	11	18
Guano Super. ...	2½ "	60 "	12	6
Wallaroo Special Manure				
No. 2	5 "	64 "	13	13
" Superphosphate	10 "	57 "	12	47

All the crops in this field (A), together with a few from field B and a part of No. 16, were cut by the binder and threshed. Threshing was started on December 7th and continued until the 11th, but we were stopped by the rain until the 22nd, when we again started, and finished up on the 23rd of December.

The cattle and horses are all in good condition, with the exception of Demijohn (one of the orchard horses) who has had his shoulder displaced, and Slitterick who was staked in the heel, and inflammation having now set in she will most probably

be destroyed. Mr. Desmond is going to operate upon Demijohn, but if the operation is not successful he will be destroyed with the other horse. The cows are also to undergo a "tuberculin test," to be performed by the third-year students under the direction of Mr. Desmond.

The sheep are looking very well, being in excellent condition, although there does not appear to be much feed for them in the paddocks.

The fallows are being worked at present to kill the weeds which germinated through the recent rains, and to conserve the moisture. One of Bartle's "Triumph" ploughs has been employed on the fallows lately, and it does excellently, covering the weeds, &c., entirely.

The Course of Instruction at the Agricultural College.

BY PROF. J. D. TOWAR.

While I am not prepared to make the following as recommendations, they are suggested to me, and I offer them here simply for consideration. Before making these suggestions for changes or additions to the already existing course, let me say that the present plan of instruction, considering everything, has many things to recommend it, and about its only just criticism is confined to the expression, "as far as it goes."

The list of studies in the curriculum covers nearly every branch pursued in the Agricultural Colleges where the degree of Bachelor of Science is conferred. The most notable omissions being English, drawing, entomology, bacteriology, and gardening.

Our Professor of Chemistry teaches physics, mechanics, all the mathematics except surveying, besides conducting evening classes for the Gawler School of Mines. The teacher of Botany and Physiology is the house-master, secretary, accountant, and instructor in book-keeping. While these men do not complain of overwork, they have time only for the briefest attention to the subjects they teach. The best instruction to be had at the present, is obtained from teachers who have made a special study of their particular line; and in order to keep up with the times, it requires the full capacity of the brightest men. The teacher of the Sciences—chemistry, botany, entomology, bacteriology, as well as agriculture, horticulture, and viticulture, must be an investigator and an experimenter as well as scholar in his line. The discoveries yet to be made in these lines, if we may judge the future by what the recent past has brought to light, are beyond

our comprehension. The practical point being that, the teachers of these lines of work should have at their disposal sufficient time to do something more than the daily routine of class work.

Without expanding fully upon the duties of all the officers of the Institution, let us consider briefly what an Agricultural College should demand of its teacher of botany. In the first place, he should teach botany thoroughly, and to do so, he has need of a suitable, well-lighted room, instruments and utensils. He needs specimens, and these he will know better, and they will serve him better as means of instruction, if he is allowed time to collect them with his own hands. Besides the needed specimens for daily use, an Agricultural College is incomplete without an herbarium of a properly mounted and labelled collection of native plants. The study of weeds and their destruction, the examination of imported seeds and the inspection for purity, germination and vitality of garden, grain, and flower seeds offered for sale by our seedsman, affords a wide field of work for a Professor of Botany. Collateral with his teaching work, and sufficient to employ in an instructive way a good portion of his time, is a scientific study of the nature, causes, remedies, and means of prevention of the fungous diseases attacking our economic plants. This would offer work for a botanist of importance equal to that of plain clerical work in an office.

This suggestion is not to decrease the amount of work done by any one teacher, but for him to do his work better by reason of more time, and a system which will allow him to do more work. It may be protested that this calls for investigation rather than teaching, and so it does, but no one will argue that a better place can be found for scientific agricultural investigation than before the eyes of the young men, who are devoting their time to the study of such scientific truths as will prove of practical value to them and the world when they begin to grapple with the stern realities of life.

Following the above suggestion—a plea for more specialization in instruction—naturally arises the thought that students, too, may wish to devote their energies more in one direction than another. A good number of students upon entering the institution are definitely determined upon the course they will follow in after life, and with many that course is in direct line with some branch of the instruction given in the College. One or two years of the general round of work and study of the regular course is certainly helpful in giving alacrity to the mind, skill to the hands, and the knowledge and discipline that comes best from actual experience and irksome toil. But during the last year, to those who are fully determined as to their future career, the College might, as far as possible, offer special training in their chosen line. To this end the suggestion is that the third-year students

be allowed to elect such work and study as their future plans require. This is by no means a new idea, as some of the present students have already applied for such privileges.

A suggestion as to physical training may not be out of place, although the practical work of the course affords ample opportunity for physical exercise. Manual labor, however, four hours a day for growing boys, while giving the all-important outdoor exercise, does not direct that effort to development of a perfect physical form. There are two ways of securing physical training—one by a regular systematic calisthenic and gymnasium practice under instruction, and the other by the practice of military drill under a competent army instructor. Perhaps where the advantages of both cannot be enjoyed, military drill is of more benefit to the student.

We are aware that the State is not now prepared to enlarge on the expense of running the institution, but we may all look sanguinely forward to the time when the Government finances will permit of the expansion, and when that time comes a few well-crystallised plans for increasing the institution's efficiency will not be amiss.

THE WOOL TRIP.

One of the most eagerly anticipated and pleasant outings that fall to the students of the College is the third year's annual visit to the city during the wool season. There is much to be learned about wool, and the visitors are on the alert to pick up all hints that are to be got. The idea of the trip itself is an excellent one. By means of the opportunity thus afforded an insight is obtained into the manner in which wool is handled from the time it has left the grower until it is purchased by the manufacturer, and the advantages of this can be seen, as every woolgrower should know something of the work that follows his, if only to give him a fuller confidence in the broker.

On Friday, November 14th, our well-known spring-dray took us early from the College to the station in time for the first train to town. On reaching Adelaide we were met by Mr. Jeffrey, who told us that we had an hour to spare before starting for the Port—very welcome news to those of us who had plenty to do in the city.

At the appointed time we met at the railway station, and journeyed to the Port in company with our instructor and a few of his students from the School of Mines.

The first store we visited was Luxmoore, R. J. Coombe & Co.'s, where we partook of light refreshments, which were fully appreciated, particularly as we had not had anything since six in the

morning. After lunch Mr. Jeffrey took us through the stores, showing us the different clips and their special peculiarities, and drawing our attention to the difference in each separate class in the clips, thereby illustrating the value of "woolclassing" when dealt with practically. Anyone who has not any knowledge of wool can see a distinction between these classes, so that it is easily seen how much more readily the wool-buyer can arrive at the true value of the wool, to the advantage of all concerned. One clip was particularly well got up, which was pleasing to not a few, especially so when we knew that an "old student" had been in charge of the classing on that station.

After having a good look through these stores Mr. Jeffrey thanked the Manager, and we walked around to Elder, Smith and Co.'s, where we saw the baled wool being pressed into smaller bales and bound with hoopiron for export. We also saw the way the wool is moved and handled generally, everything being done both quickly and well without any unnecessary expense of labor or money.

Any one who is used to seeing the wool handled on small farms, &c., would be surprised at the ease in which this work is carried out here. After inspecting the lower storerooms we were invited to dinner. After the usual speeches, &c., we were escorted to the top rooms where we saw some hundreds of bales of wool, amongst which was some of the well-known Murray clip. We were glad of this chance to compare it with the other wool of South Australia, as we had seen it at the sheds where we were particularly struck with it.

Although this wool does not bring the top prices it runs very near it, and would certainly do so if it was not for the large amount of natural grease in it.

After thoroughly inspecting these stores and getting a few tips from Mr. Fenner regarding the landing of the bales and such like useful hints, we said good-bye and strolled along the wharf until time to go home. We were not sorry to get into the train and sit down, and were still more pleased to see the "dray" at the station on our arrival at Roseworthy.

We are all glad to have had this opportunity to see the wool stores, and are very thankful to Messrs. Jeffrey, Luxmoore, R. J. Coombe & Co., and Elder, Smith & Co. for the trouble they took to make our trip both instructive and enjoyable.

Tablet to our Fallen Comrades.

Owing to the lack of interest evinced in this fund the Committee has not yet done anything further towards the erection of a tablet at the College.

Since the last issue of the "Student" the following subscriptions have been received:--The Minister of Agriculture (Hon. R. Butler), £2 2s.; H. E. Laffer, 10s.; H. Main, 5s.; making the total amount now in hand £9 11s.

As from £12 to £15 will be required to furnish a suitable memorial, several pounds are still wanting, but it is hoped that this amount will be forthcoming in time to get the work in hand early in the new College year.

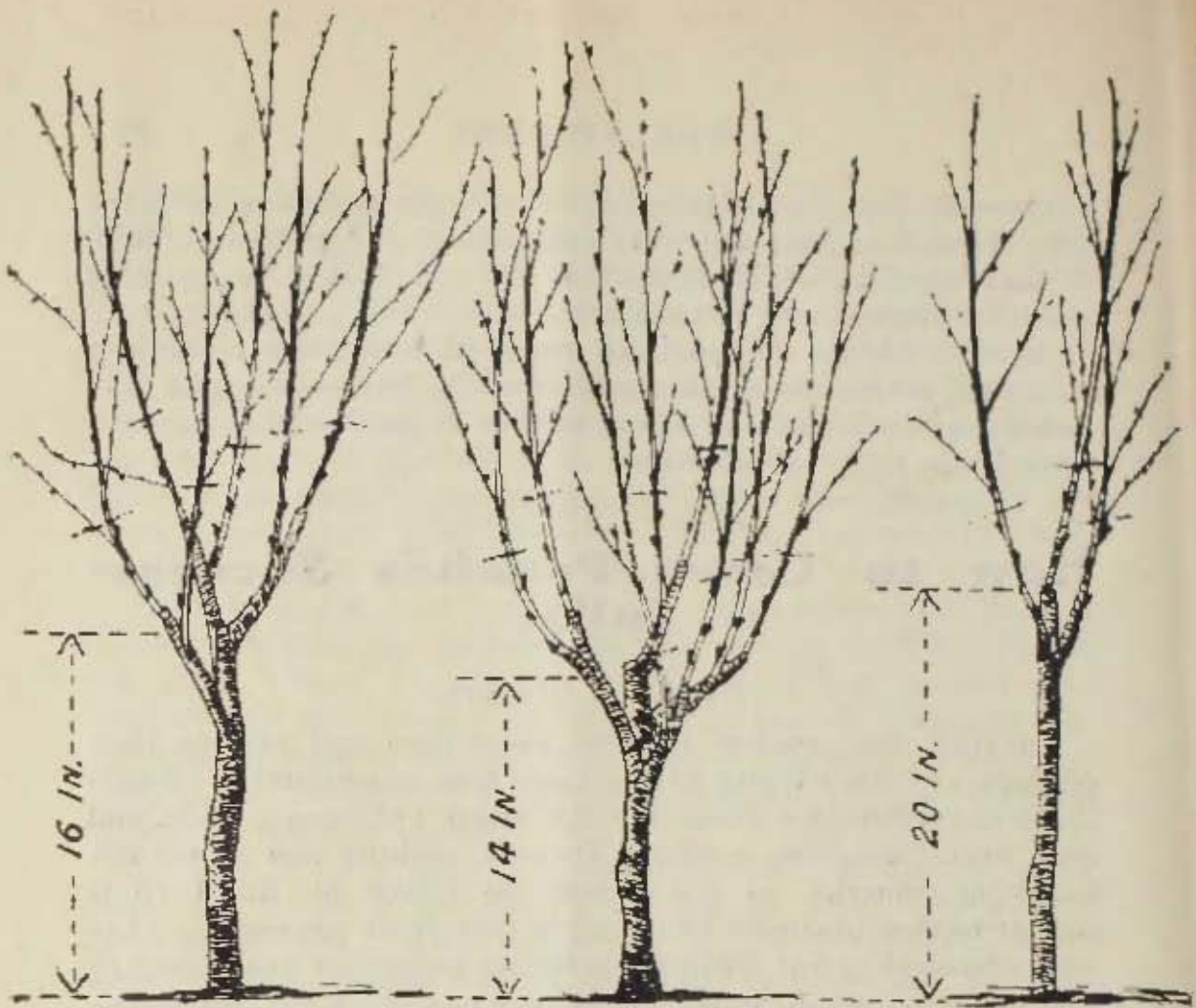
How to Grow Peaches Successfully.

By H. B. ROBSON.

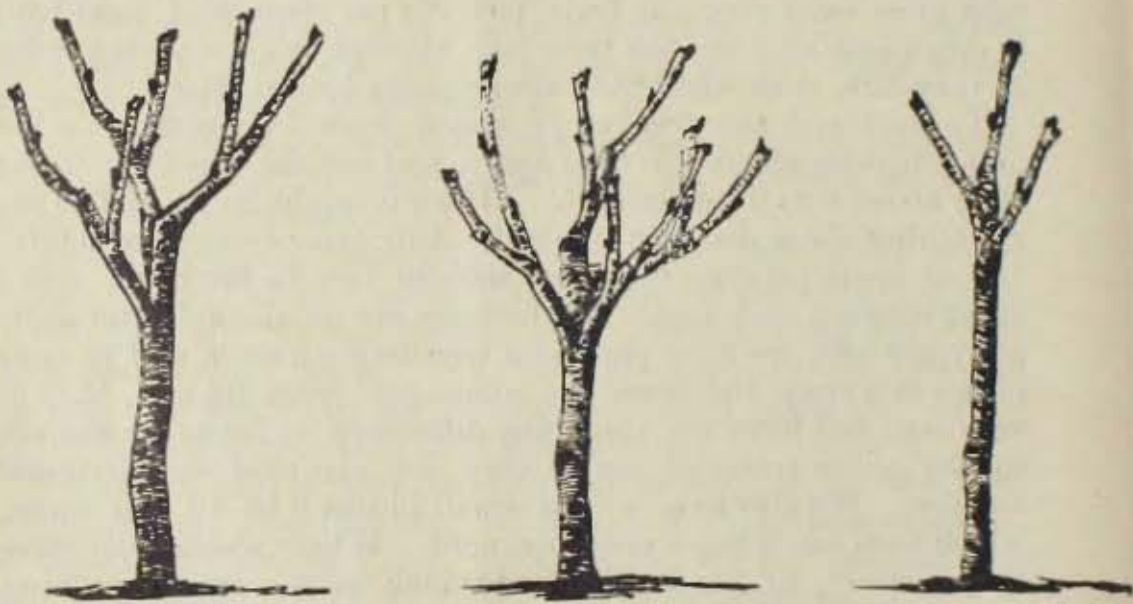
To grow fine peaches requires more care and trouble than perhaps any other fruit; at the same time one cannot grow anything to perfection without a large amount of care, trouble, and hard work (excepting weeds). There is nothing new in the few following remarks, as the system we follow at Ellythorp is similar to that practised by all up-to-date fruit growers, and has been preached by our leading Gardening papers for years, though with little success in converting a large number of old gardeners, who say--too much trouble, and costs too much. They undoubtedly grow some very fine fruit, but the per centage of good fruit is much smaller when the trees are allowed to grow pretty much as they like, than when they are properly looked after.

To start with the tree as it comes from the nursery:--We plant in rows about 15 feet apart, and cut the tree back to one stem about 6 to 9 inches high. Here it might be as well to say something about distance to plant. Our older trees were planted 18 feet apart between the rows and 30 feet in the rows, with 6 vines between each tree. As the trees are on almonds and about 30 years old, we have planted a tree between each, and in some places two trees. The trees are about ten years old now, they do very well and have not made any difference, as far as we can see, to the older trees, of course they are manured and irrigated heavier. We also have a few small blocks 8 to 10 feet apart, which turn out a large yield per acre. When planted so close they require all hand-work, and much more care in pruning, watering, and manuring to keep them in good condition, if they were left for one season only without pruning they would be spoilt, as they would get too thick and smother all the fruit spurs, except the top ones. We prefer about 15 x 15, as that gives room for horse cultivation. Still it is possible to turn off as much fruit from one acre, as from several by thick planting.

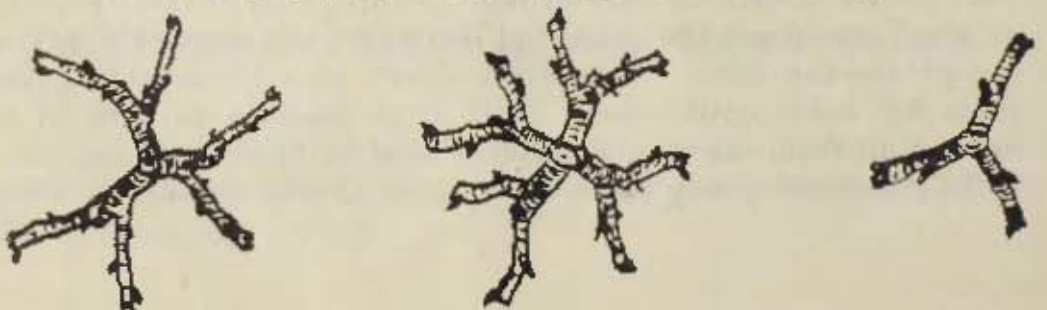
To follow our young tree: When the shoots are about three



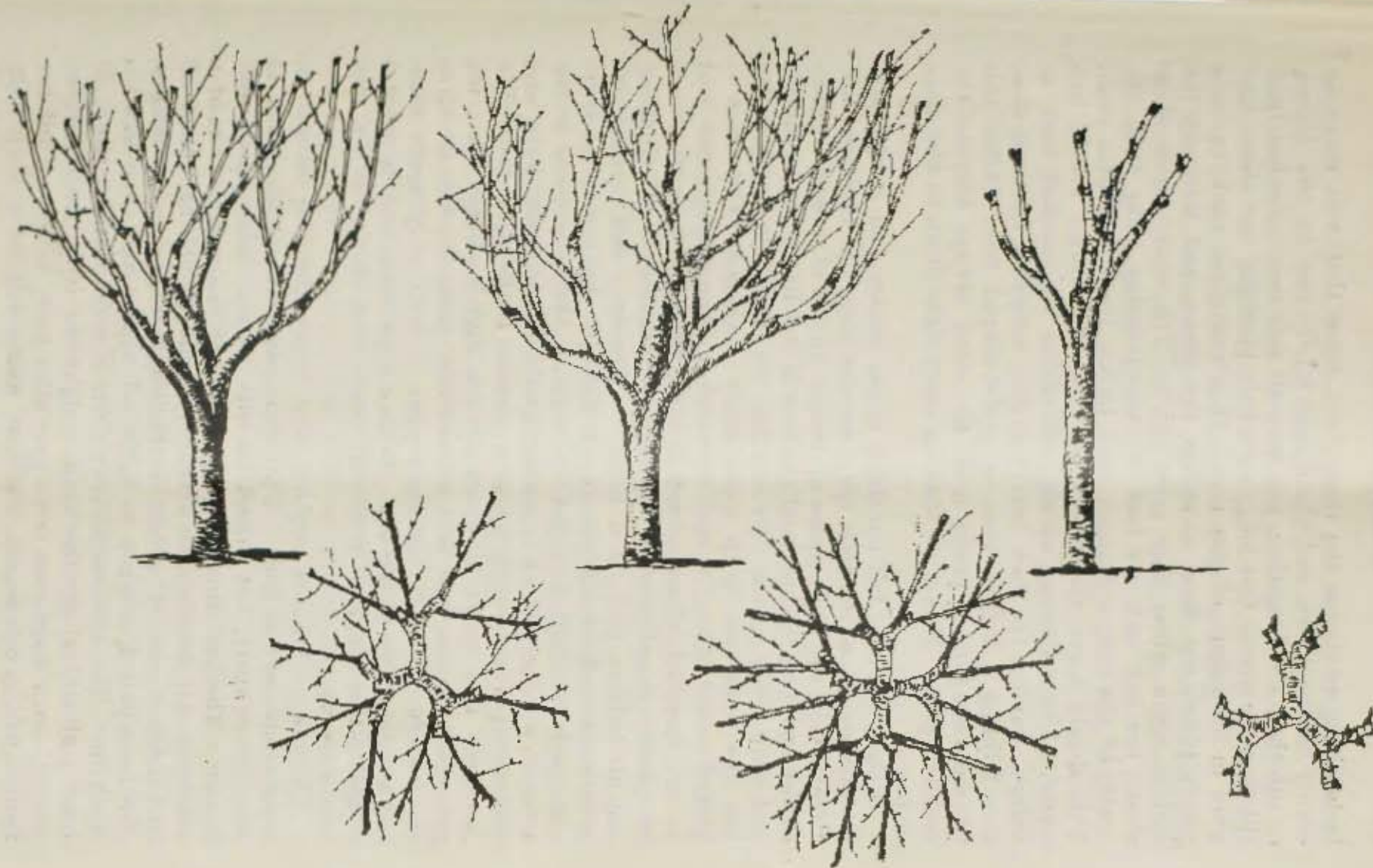
GROWTH MADE FIRST YEAR AFTER PLANTING.



SECOND WINTER PRUNING.



GROUND PLAN FOR SECOND WINTER PRUNING.



THIRD WINTER'S PRUNING AND GROUND PLAN FOR SAME.

inches long we choose the three best, those that will make an evenly balanced tree, and pinch back all the rest to two leaves, or rub them off altogether, and keep all side shoots pinched back till they are over a foot long, then only pinching out those that grow in the centre of the tree. If growing too rank or in a windy place, top them to stiffen the stems, and thin out the middle again when they grow thick. The next winter these shoots are cut back to a bud or buds pointing away from the centre of the tree, and about nine inches from the main stem. This should leave the tree with three short arms evenly balanced. The following spring the shoots are pinched back as before, leaving the two best pointing outwards on each arm, thus forming a hollow vase or goblet-shaped tree. After this the trees are pruned pretty much the same, always keeping the middle open. This gives fruiting spurs right down to the main stem.

If the trees were left too thick in the centre you would have all bare stems, as the fruit spurs require plenty of light and air. Besides this, the fruit ripens up better, and is of a much better colour and finer flavour, and the tree is less likely to get disease and more easily got at. By starting the stems low and pruning low the trees are much more easily managed. The fruit is picked easier when it can be reached from the ground, and is not knocked about so much when all other operations can be done expeditiously. Pruning, spraying, and thinning are all tedious jobs on a ladder. Another, and perhaps the greatest benefit of low pruning is that the fruit and trees are not nearly so much damaged by winds. We only have a few trees on a 30-acre block requiring a ladder to pick the fruit, and these are grown on long stems, so cannot be brought low. We have not any under 20 years old too high to reach from the ground. We also find we can cultivate closer to the trees, as the branches are stiff, and the weight of fruit only opens them out a little wider at the top. With a high stem and horizontal branches the weight of fruit will bend them down in the way of the teams.

Thinning.—Peaches require very heavy thinning to get an even sample of fine fruit. Up to now we have thinned out to four inches apart, but intend to thin to six inches apart next season. The best time is when the fruit is about the size of a marble. All double and unshapely fruit should be pulled off and the best ones left about six inches apart along the boughs. We have pulled as many as 1,500 off a tree and then left too many on. The advantages are: first, a much better sample of fruit and still about the same weight, as it is much larger; second, much more even crops year after year, because if all the fruit is left on one season, the next there will be a very light

crop; third, the fruit is much easier picked, packed, and sold, fetches a higher price, and there will be very few culls.

These notes are from our own experience for a number of years here at Ellythorp, and so far we have not found any damage to the trees from the heavy summer pruning.

[The blocks accompanying this article have been kindly lent by Prof. Perkins, and will serve to illustrate the principle of Mr. Robson's pruning —Ed.]

WHEAT.

Pig.

Effie.

Dad.

Father.

Pointer.

Jackeroo.

Strawberry.

Polar bear.

Harvest over.

Very light yields.

No more earthquakes.

Nothing more has been seen of "Teddy."

We are glad to report that the famine scare is over.

Our latest student is progressing favorably, and with careful handling will do very well.

The fellows are working up their "Amphelography" now (third and first years as well as second), and find the occupation an "absorbingly" interesting one.

Vehicles are cheap; horses are apparently very cheap here just now, especially good stayers.

It is rumored that "Hurricane Sid" has signed the pledge quite recently.

Gawler seems to have a great fascination lately for some of the fellows. It's a question where the attraction lies. We would warn Gawler, however, that if these visits continue they may experience a slight drought.

It has lately come under our notice that "sweet streepings" are being applied to vines as a fertiliser.

An interesting addition has lately been made to the study of Natural History. It is that "Hold rabbits are not usually H'in in the daytime, but usually round the H'edges of the scrub."

Another—rather old—saying of Antic's is the following:—H'I. ad the hanimals H'Esk and H'Etterick in the appy-jack-arrows, and they went down number hate as straight as a h'arrow.

Don't forget the meeting on March 6th, at 8 p.m., at Ware's Exchange Hotel.

VINEYARD NOTES.

Once again we are on the eve of vintage. The grapes are rapidly approaching maturity, and if all goes well with regard to the weather a start will be made about the 24th of this month.

On present appearances we anticipate a good yield of fruit, and the quality, thanks to the splendid rains in December, should be good. Until these rains (2.32 inches) fell the crop looked very doubtful, but now the berries are well filled, and should yield a high percentage of juice.

Birds, principally Starlings, are again doing considerable damage, it being necessary to keep some student shooting the whole time.

Just now, of course, the preparation for vintage is in full swing. Scrubbing, sweeping, and scraping of all utensils and machinery keep all hands employed.

We shall have a water service right through the cellars by vintage time, and this alone will be a great improvement.

A new cooler, much larger than our old one is being built, and should the weather prove hot we hope to obtain good results. The new set of tubes will be connected with the old ones in order to get as much cooling surface as possible. Here the water service will come in handy, for we intend to minimise labor by connecting the spray battery directly on to the pipes. By this means the necessity for using a spray pump will be done away with.

The vines in general look very well in spite of the low rainfall last year. The young vineyard especially looks well, the vines having made exceptionally good growth. Currants set a fair crop this season, and a nice lot has been dried.

The fruit crop was very poor, most samples being small, though from some of the young grafts on almond stocks very nice apricots were gathered. Peaches were small and poorly flavored.

The following is a table of the rainfall for 1902:—

January	...	.40	July	...	...	1.03
February	...	.44	August	...	...	.80
March	...	1.46	September	...	...	.92
April	...	.06	October	...	...	1.20
May	...	.22	November	...	...	.28
June	...	2.52	December	...	...	2.32

Total for year, 11.69 inches.

A FEW DAYS IN THE WIMMERA

BY R. H. MARTIN.

A train journey of about 230 miles brought me from Melbourne to Birchip, whence by a drive of some 15 miles my destination was reached.

It was difficult to believe that it was midwinter, as the country was just as parched up as it had been all the summer, saving that in the bottoms of the crab-holes in some localities a few blades of grass were just showing; also the fact that in the early morning there was occasionally ice on exposed pails of water mildly suggested that it was otherwise than midsummer, although during the day it was decidedly hot in the sun.

Birchip, which is just the ordinary railway township of a few stores, houses, hotels, &c., is situated on a bare treeless plain, giving the place a desolate appearance, although in the township a number of sugar gums have been planted, and are growing well.

A drive of a few miles brings one into what is known as "Box Country," the box being a tree growing to a height of 20 or 30 feet, resembling our peppermint to some extent. The box-trees grow between the mallee and the plains, and when the trees are rung, the land makes very good pasture in good seasons. After several miles of this, the mallee is reached, and from here it extends north to the Murray, and east and west for very great distances. The general contour of the country is flat, there being a slight continuous fall towards the river. The nearest hill is about 20 miles away, and though it is not visible, being really little more than a large mound, it is of course honored by the title "Mount," something or other.

Most of the soil that came under my notice was mainly a rich reddish, loamy clay on a yellow clay subsoil, but there is a large variety. On the whole it is very similar to the College land but for the fact that there seemed to be a complete absence of limestone, as I cannot recollect having seen any there at all.

The bulk of the mallee I passed through resembles that which used to be on "Nottle's" at the College, being about the same size and height, although it varied a great deal in size and closeness of growth.

Crab-holes are very numerous, and often very large and deep, so much so indeed that unless care be taken it is very easy to capsize a stripper in one of them. There were also large areas of land of a sandy nature and wooded with pines, similar to the "Island." I think though, on the whole, the general class of the land I saw was better than the bulk of the Roseworthy land.

The mallee was boomed and largely settled some twelve or so years ago, so that what farmers were there were obtaining splendid crops, the average rainfall being about 24 inches. With that amount of rain they found they could grow almost anything, as the land was so fertile. Fruit trees were even planted, and did well. The land was also so cheaply worked. They could clear thick mallee by rolling in winter and burning in summer at a cost of 1s. to 2s. per acre, they would then plough up

with a stump-jumper, broadcast and harrow in the seed, go round the crop two or three times in the growing season with a shoot cutter and keep the mallee in check, and be disappointed if they got less than two or three bags to the acre. The cockey informed me that he had obtained an average of five bags to the acre off a section, just by simply running his harrow after last year's crop, using as seed what had got knocked out and wasted in the stripping, and he was not the sort who gives testimonials to patent medicines. Under the circumstances the farmers do not have to be continually holding meetings to discuss and argue upon the much debated subject, "Does farming pay?"

Since then things have fallen to a very low ebb, the rainfall has dwindled down to almost nothing, and even with the use of winter fallow and artificial manures, the crops have forgotten to come up and benefit by them. For the last few years the farmers have barely got their seed back, except where in rare instances a few have been favored by a heavy local rain just when it was particularly needed. The crops are all put in at least possible cost, one method largely adopted is to broadcast the seed and disc it in with disc harrows. Both autumn and winter fallow are used. I saw one drill working, but it is only in very few sections it can be used. However, even the crops drilled with superphosphate on winter fallow failed to grow more than an inch or two, so the farmer who put his crop in more cheaply lost the least money this season.

This year has been so far the worst yet experienced, and has starved out a large number of settlers. In June last, none of the crops were up, or those which had come up had died off again, but in spite of that there was very good dry feed in some parts, though the absence of good water for stock rendered it valueless. The only means of having water available for stock is by conserving it in dams, or "tanks" as they are called. The subsoil is very tight, and when once full it holds splendidly. Well water is obtainable at considerable depths, but it is too salt to be used undiluted even for stock. Most of the tanks have been made by the Shire Councils and vary in size from 2,000 to 10,000 cubic yards capacity; some of them depend on local catchment, but the majority are connected with the channel. This channel has an average depth of about four feet and width of eight, and has been constructed from Birchip to Sea Lake, a distance of about 20 miles; it has very little fall, three feet to the mile being considered fairly big. There is a good catchment around the Birchip and a good fall of rain will bring the channel down a banker, and they say, although the channel is so nearly level, the water rushes down at such a pace that is not uncommon to see sheep drowned that had the misfortune to fall into it. The channel looked so level that one would suppose that unless directed

by finger-posts the water would not know which way to run. However, as several of the dams were nearly half full it looked as if it answered its purpose satisfactorily. Water carting, of course, was very general, some of the farmers having to cart as much as 15 miles. At the present time they are continuing the Birchip end of the channel to Lake Buloke, some 20 miles, and which, when completed, will mean a much better pure water supply.

The settlers talk of the irrigation scheme for the mallee from the Murray with more enthusiasm than hope, as the Murray as well as the scheme are still a long distance away.

If we may judge by the manner in which the Americans have transformed deserts into paradises, the possibilities of the mallee when irrigated are enormous, and I hope that the next time I visit this part of Australia irrigation will be carried out on a large scale.

The Combined Harvester Trial at Smithfield.

By R. S. B.

On Friday, November 28th, a public trial of complete harvesters, under the auspices of the Royal Agricultural Society, was held on Mr. W. Smith's farm, near Smithfield. The arrangements generally this year gave great satisfaction. The paddock selected for a trial carried a crop of Marshall's No. 3 wheat, and appeared to be very even in character. The students, or at least the majority of them, were present, having got there somehow after a dusty ride in the "drag." We were all very interested in the work of the various machines, many students were cruising up and down judging them as they thought fit, and various were the opinions passed as to which were the best. We were invited by the courtesy of Mr. J. F. Martin of Gawler, to partake of a light lunch, and for which we all sincerely thank him. During the afternoon Mr. Bartles' "Triumph Plough" was working, and amidst clouds of dust I believe it did some very good work.

The results were as follows:—

1. Massey Harris No. 1 471 $\frac{1}{3}$ pts. Actual time, 2 hours 36 minutes.
2. Climax No. 2 (May Bros.), 467 $\frac{2}{3}$ pts. 2 hours 50 minutes.
3. The Union (Nicholson & Morrow). 466 pts. Actual time, 2 hours, 33 minutes.
3. Clime No. 1 (May Bros.), 452 pts. Actual time, 3 hours 10 minutes.

It will be seen from these results that the local harvester made

by May Bros. of Gawler, came well up on the list. The Massey-Harris is quite a new machine, and it got a first place. The Sunshine seemed to be right out of it, although one finished first, it also made a very good sample.

The Saturday after (that is, November 29) a Martin machine was brought to the college, it was tried at Ebsary's in Field No. 2, amidst a number of students who were interested in it. It did not do very good work, but this I think was due to its having a very fast team in it, and it lost a great deal of grain. After the trial Mr. Ferguson courteously explained the different workings of the machine, and the students were very interested in it, but I think it ought to be fitted with a chaff carrier and be worked with a slightly slower team than it was on this occasion.

Poultry Industry.

BY T. E. YEILDAND.

Poultry has long been neglected as a useful and important industry, and although many farmers keep fowls, they do it more as a necessary evil than from a profitable point of view. Yet when one goes into statistics he is brought face to face with the fact that this industry, which is neither properly recognised nor appreciated, has returned to this State over one hundred thousand pounds (£100,000) for eggs alone in the year ending 1902. These figures are somewhat startling, and it makes one wonder where all the eggs came from, because before we can export any there is a large local trade to be supplied.

The most pleasing feature about this industry is that the greatest number of eggs come from the districts which of late years have been almost failures from a grain-growing point of view, and it shows very plainly, that that which is almost discarded in years of plenty, on account of its littleness, is almost wholly relied upon in years of scarcity.

The question arises, is this industry worth encouraging? and, if so, what way should it be done?

We emphatically assert that it is worth every encouragement by this State. An industry that can return to those interested in it over £100,000 from outside the State, without practically any effort whatever on their part, must be worth far more than the value placed on it at the present time, and causes us to speculate in the probable future, when we hope to see a greater interest taken in it by all concerned.

If so much can be made out of poultry in the present unsatisfactory state of things, what will be the result when there is a greater and deeper interest taken in it by every person possessing poultry of any kind? It will progress with leaps and bounds,

and in a few years, in the writer's opinion, be worth at least a quarter of a million per annum to South Australia.

There is another important point in this industry that has been altogether neglected, and that is the export of poultry itself. There is a big future before us if the proper birds are bred, and attention given to the quality, killing, and freezing, so that they can be landed in England and elsewhere in the best of condition.

It is strange that in this State there are no large poultry yards or farms; compared with the other States we are all behind the times in this respect, for they have many large flourishing and profitable farms almost entirely devoted to the raising of poultry and eggs.

How can we best increase this industry? The first, and the writer thinks the most important, method is for the Government to appoint an expert, whose whole energy shall be directed towards the improvement of this branch of agriculture. There are others that have specially appointed experts, whose export trade is not nearly so large as this one, and why should not this be worthy of the same consideration? The subject has been brought before the Council of Agriculture, so we shall hope to hear more of it in the near future. If any expert is appointed he could go around amongst the farmers and poultry people, and give them advice as to the proper varieties to keep in the different localities, and how to improve the existing flocks of birds held by farmers at present. This method would arouse a great deal of interest amongst those keeping poultry, and in proportion to this interest would the export trade be increased. The Government could enlarge the poultry yards at the College, and make that a centre from which the expert could work, and where experiments could be carried out, and good stock birds kept.

In conclusion, we believe that there is much room for improvement in this matter, and that the improvement can best be achieved by the appointment of an expert to lecture and carry out experiments, and supervise a large poultry run at Roseworthy.

Trip through the Abandoned N.W. Runs.

(Continued).

BY H. J. McDUGALL.

Leaving the Birthday Well about 4 p.m., I journeyed back to the Teatree, camped for the night, and went next morning on past the new station to the old, camped there again, and thence to the Mount Eba, or Mount Paisley as it is now called.

Leaving the Mount in a southerly or south-westerly direction, over stony tableland country with saltbush and grass in the crab-

holes and heavy mulga on the flats and watercourse, I made my way via Mount Ernest well to Mr. Gourlay's place at Bon Bon, Billa Well. He and his family were living there at the time in tents, six being pitched in a square with a big break around them, and having a two-roomed house in which to do the cooking, keep rations, &c. I was made welcome to stop the night, so turned my horses in the horse-paddock. Next day, his pump having gone wrong and being under water, the well had to be forked with a windlass and 10 gallon buckets, as the well was inside the engine-house and no other appliance would work on it. We started drawing about 3 p.m., and kept going in pairs, each drawing 20 buckets, and as there were four lots we kept the pace fairly lively, but for all that, it was not forked when I left at 9 a.m. next morning, the pump being just in sight. There was over 30 feet of water to pull out besides the spring pouring in all the time.

In company with another man whom I met at Bon Bon, I left in a S.E. direction over similar country with more scrub and some patches of sand to Mount Vivian, where there are two wells, one with a windmill, tank, and troughs, and the other with only a windlass. The water in both is good enough for irrigation, but there is not a large supply in either. The house has several rooms, men's quarters, and other buildings, which are nearly all thatched with the native cane-grass tied on with strips of hide.

Next morning we parted company, and soon after doing so I took a wrong turning to the right, and leaving the track I intended to have followed I went on all day and at sundown had not struck a track anywhere. I was now in sandy country with more timber, mostly mulga, myall, and various bushes, but as I knew I had to bear to the left to pick up the road I kept on in an easterly direction. Just as the moon rose I struck the banks of a lake (the Younghusband, as I found out later), a large dry salt lake. Knowing that these lakes are apt to be boggy I skirted the edge until I reached the northern extremity, and found the fence I had left earlier in the day, following this I came to a corner of two paddocks where I decided to camp for awhile. After sleeping for three or four hours I woke and it seemed as though day was breaking. I rolled up the pack and went for my horses, which were hobbled about a quarter of a mile away, and started on. After having travelled two or three miles the light did not seem to get any clearer so I stopped again, and tying up the horses lit a fire and lay down by it until dawn, and when I made a fresh start I followed the fence I had found the previous night. But this was taking me too far south, so I went through the first gate I came to and climbed to the top of a small hill. From this I could see a roof and a windmill derrick in a big hollow, about a mile away, and from the description given me, I

knew it to be Marshall's Swamp. The top of the windmill is lying wrecked on the ground, as also a large corrugated galvanized tank about a quarter of a mile away. There is a large stone cemented tank and a two-roomed hut, also a shallow horse well, about 30 feet, with water rather bitter but fit to drink. In the swamp was a mat of clover about three feet high, just half dry, where I hobbled out the horses. About 11 a.m. I started in a northerly direction for Parakylia, as I wished to see Mr. Hamp, who is caretaker there. Most of the country I passed through was scrubby with splendid herbage. About two miles from the station, in a watercourse near Hobbs' dam the geranium was up to my stirrups, though I was riding a 16-hand horse; that, however, is exceptional, and only a small patch, but plenty of it is 12 to 18 inches high.

Leaving Parakylia early next morning, and just after crossing the Red Lake, I met a flock of fat wethers from Arcoona Station, to be trucked to Adelaide, travelling to the Coward Station as there was no feed on the road to Port Augusta. At Nolan's Well I came across a party of farmers who with their horses had taken commonage on Parakylia run, had my dinner with them, and pushed on, reaching Purple Well about 9 p.m. after a 17 days' trip, during which time I had travelled nearly 400 miles.

On the country through which I had journeyed there was sufficient feed to have fattened half the stock in this State, but none, or practically none, of it is being used. There are plenty of improvements on this land, many of them quite unnecessary and put together anyhow, as long as they stand up for the valuers. These improvements must be paid for, which brings the yearly rental up to such a large sum that only a capitalist could pay it and wait for returns from horses or cattle, and it would be impossible to take a large number of sheep on to it as the dogs are too numerous. What were taken would have to be shepherded until such time as the dogs could be partially cleared and the country vermin-fenced, which means more expense. It would have paid the Government better to have written off, or at least written down, the improvements and had all that country occupied, instead of feeding vermin.

The dingoes are a great pest. A teamster working for Mr. Gourlay showed me his reins all chewed up by the brutes. He had camped beside the waggou, and the reins had been lying where he unyoked his horses. The much despised aboriginal is the smartest hand I have seen for these gentry. With a rifle and waterbag he will go away in the morning soon after sunrise to pick up the tracks at water, and he will patiently follow them until he finds the dog taking his mid-day siesta under a shady tree or bush and shoot him.

THE END.

CRICKET NOTES.

The cricket season opened in real earnest at the College on Saturday, October 11. It was rather unfortunate that our first match should happen to be on a holiday, and the raising of a team at all was due to those who waited a day later for the purpose.

THE LYRICS. *Score*:—College, 85. Lyrics, 165.

This was the opening match of the season, and we shook hands with bad luck after the first ball was bowled. The College went in first, but with the score of 8 our first wicket fell. It was not until our captain, Frank Phillips, came in that the runs began to increase. With a score of 25, however, his wicket fell to a well pitched ball. The next highest score was 12, being compiled by W. T. Naish.

The Lyrics went in and scored 165. We have to thank W. Dawkins for his bowling. He took 5 wickets for 40, and F. Cooper 3 for 53.

ONE TREE HILL.—College, 120. One Tree Hill, 7 wickets for 190.

Our next match was at One Tree Hill on October 24. We drove to Gawler in the students' cart and pagnel, and were conveyed from there by Mr. Mortimer in a four-in-hand drag. It was a perfect day, and One Tree Hill with its many white gum trees and its picturesque cricket ground in a fine shady gully, was the envy of us all. Phillips won the toss, and we went in, but although the wicket was good, the bowling was better, and again we have to thank the captain for pulling his team out of a state of utter collapse, by adding 54 not out to his credit. W. Spafford played a good game for his 14. We were very kindly provided with afternoon tea by the ladies, and then resumed play by taking the field, leaving the One Tree Hill's to beat our innings of 120. When stumps were drawn at 6 p.m., they had lost 3 wickets for 34. Their captain, Mr. Bishoff, not out. On resuming play the following Saturday, Bishoff piled the runs on rapidly, and our bowlers had a very bad time of it, as it was extremely hot. The boundaries were small and the grass so slippery, that half the field were obliged to take off their shoes in order to stand up with safety. This match will long be remembered for our disgraceful fielding. Catch after catch was missed, and the game decidedly lost by it, for at the drawing of stumps at 6 p.m., they had 7 wkts. down for 190. Professor and Mrs. Towar drove over to watch the match, and were, like the team, heartily welcomed.

The Professor in a very neat speech thanked the people of One Tree Hill for their cordial welcome and hospitality, and Mr. Phillips on behalf of the team, thanked the ladies for their enjoyable afternoon tea.

SOUTH GAWLER.—College, 5 for 155. South Gawler, 436.

Played at Gawler. The weather was extremely hot, and the ground so hard, that almost every ball would, if not fielded, travel to the boundary. The South Gawler won the toss, went in, and slaughtered our best bowlers. They scored 103 before the first wicket fell. When the stumps were drawn at 6.30, the score was 8 wickets down for 378. On the following Saturday they closed their innings early in the afternoon with a score of 436 for 11 wickets. I forgot to add they were playing 13 men. The College then went in, and at 6 p.m. stumps were drawn, and the scoring book showed 5 for 155. Phillips carried out his bat with a well played 104. McLeod batted well for his 22. Cooper 9 not out. It was supposed, until recently, that all matches would be played out in the second round, but the Association have altered the table of matches, and this will now be impossible.

UNIONS.—College, 93. Unions, 120.

Played at College. The home team made a total of 93. Phillips 22, X. A. Seppelt 16, L. Seppelt 15, Berry 14, McLeod 13. The Unions made 120. Phillips did the best with the ball, taking 7 wickets for 55. In the second innings we had 3 wickets down for 96, the two not out men being Phillips 49 and Naish 26. It is a pity matches like these cannot be played out.

GAWLER. College, 188. Gawler, 110.

Played at College on January 10. After winning the toss Gawler went in, and knocked up 110 in a pretty smart manner. X. A. Seppelt, our only bowler with pace, took 5 wickets for 36, L. Seppelt 2 for 8. On the College going in runs were not very free until the fall of the third wicket, when Phillips and Cooper got together and brought the score up to 77. Phillips was stumped for 39. At the fall of the fifth wicket stumps were drawn, and our score was then 85. On resuming play next Saturday in the middle of a duststorm and a high thermometer the College did better. Cooper batted exceptionally well, and his long drives were worthy of mention. He was caught out at 80, and our innings closed a few minutes later for 188; Pickering 16, L. Seppelt 13, Berry 12. This is our only win in the first round. Cheer up mates, there's another one yet!

THE PLAYERS.

(N.B.—The writer is a deadly fighter).

F. Berry—Incline to "slog" and chance too much. Could be a little smarter in the field.

F. Cooper—Has improved greatly in batting, but fallen off slightly in bowling. Forms one of the main supports of the team.

W. Dawkins—Bowled well at beginning of season, but has gone off visibly, perhaps through want of confidence and a freer action both in bowling and fielding.

E. Law-Smith—Has not had much chance of proving his batting powers, but is a fair change bowler. Must be much sharper in the field.

D. McLeod—Has improved in batting and keeps wickets fairly well, but must risk more when he sees a chance to stump. Fair change bowler.

W. T. Naish—Improving rapidly in batting and ought to do well in second round. Fairly good in field but needs waking up.

E. Phillips—Is very good captain. Without doubt a fine bat and the best all-round man in the team. Bowls exceptionally well at times. Is a safe and sure field. Would give himself a better chance of scoring, and the team more confidence, if he always took strike.

P. Pickering—Plays a much steadier game than previously, and ought to do well next year. Must get on to the ball more quickly in fielding.

L. Seppelt—Has not improved in batting this year. Too anxious to score, and would do much better if he played a steadier game. Has improved in bowling.

X. A. Seppelt—Came as a surprise to the team. Has proved himself a capable fast bowler, although would do much better if he could retain his balance as he delivers the ball. The same applies to fielding.

W. Spafford—Improved greatly in batting and bowling, and is good in field. Has been playing against bad luck.

Emergencies.—R. Hayward, R. Macindoe, H. Mayne, P. Knappstein, A. I. Campbell, all improved with the small amount of practice they have had. A certain emergency, mentioned above, has enough enthusiasm for four cricket teams. We wish him luck next year.

We are indebted to Mr. Day for his excellent umpiring. He has given the College and our various opponents fair and unprejudiced verdicts.

HINTS TO THE TEAM.

Remember we have only one captain. Don't each try to fill his place; it's not vacant. If a man gets a catch let him take it quietly, so do not shout out instructions in a College whisper with both hands to your mouth. Shut your eyes and hope for the best when you wipe at a fast straight ball in your block; swear silently or in an undertone when you miss it. Let a qualified tectotaller drive home at night. Watch the captain, and get out deeper or come in according to what his waving may indicate. Don't give him the trouble of having to shout himself hoarse every few minutes of the game.

THE ONLOOKERS.

Professor Towar guesses cricket is a pretty slow game, and many others guess, that his guess, is not a guess, but a decided fact.