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COLLEGE OF AGRICULTURE STUDENTS UNION

1955 - 1956

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Magazine of the College of Agriculture Students' Union

1955-1956

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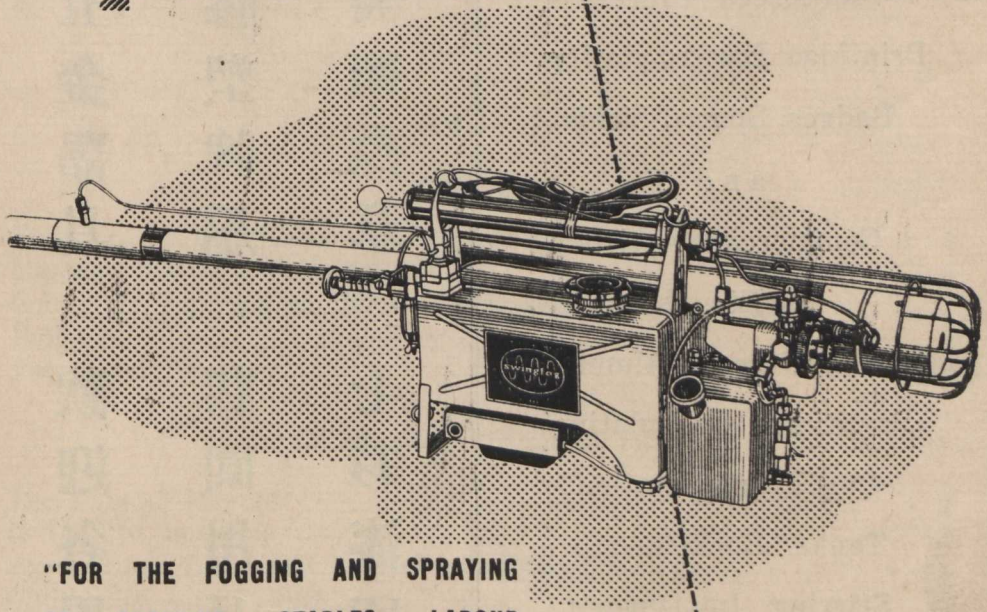

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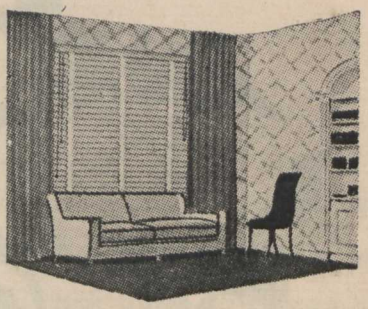

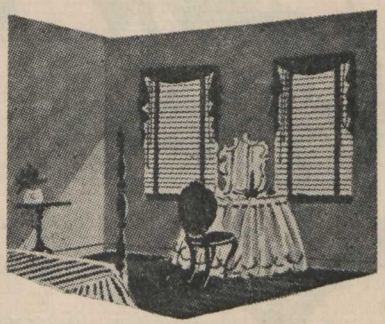

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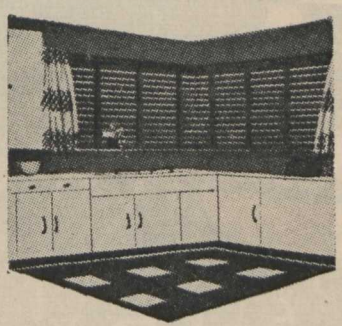

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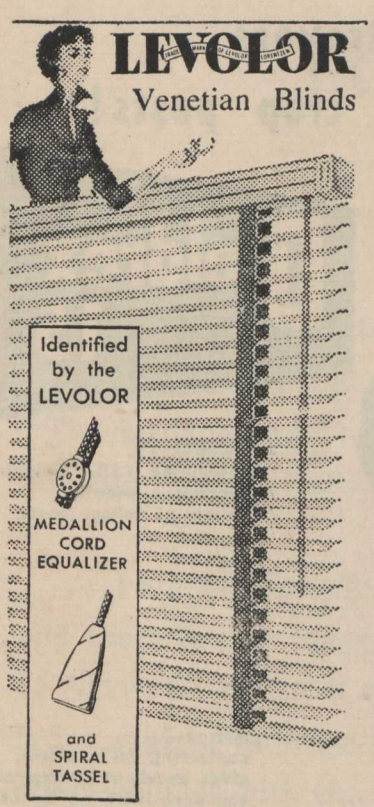

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FOREWORD

I am delighted to be able to send you a message on the occasion of the publication of the fourth post-war edition of "The Serdang Sun" and the first since I took office this year as Minister for Agriculture.

I am very keenly aware of the importance of agriculture, and therefore of the great and important task of the College of Agriculture. I am convinced that one of our greatest needs is for a great increase in the number of agricultural officers in direct contact with the people, and they will have to come from the College.

I am sure that the College and its students past, present, and future will be worthy of responsibility they all bear, and will bear in increasing degree in the future.

ABDUL AZIZ BIN ISHAK,
Minister for Agriculture,
Federation of Malaya.

Our Principal, Mr. O. M. Lee and Mrs. O. M. Lee,
a Senior Lecturer.

MESSAGE.

It gives me a great deal of pleasure to send a short message of good-will to "The Serdang Sun". I believe that this magazine is fulfilling its object in keeping our Alumni and all our other friends informed of the students' activities and of their wide range of interests.

In this year 1956, we shall reach our 25th birthday. We look forward to celebrating this occasion and will give a report on it after the event.

Best wishes for continuing success to all those concerned in making The Serdang Sun a magazine of which to be proud.

O. M. LEE,
Principal,
College of Agriculture,
Malaya.

COLLEGE OF AGRICULTURE

MALAYA 1955/56.

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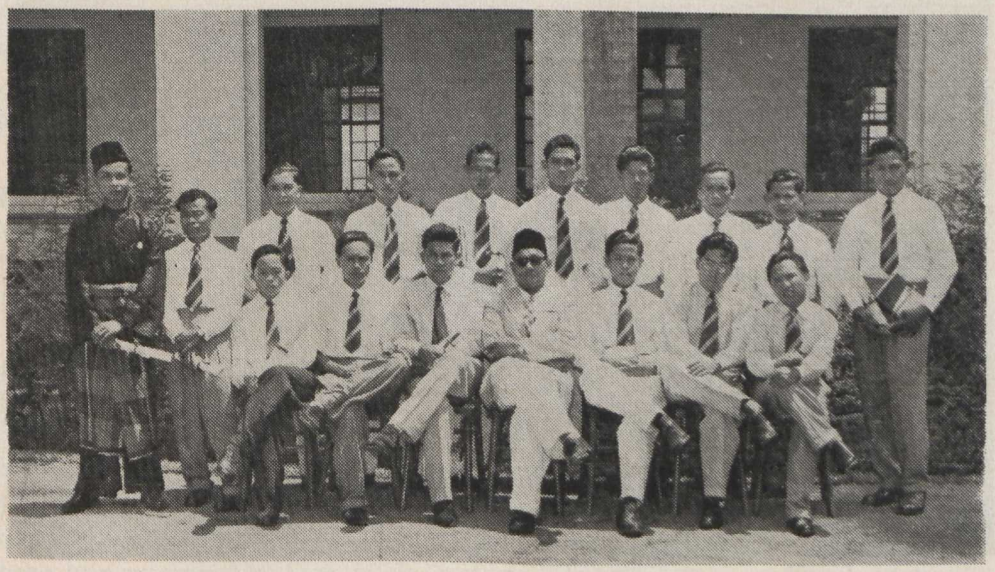

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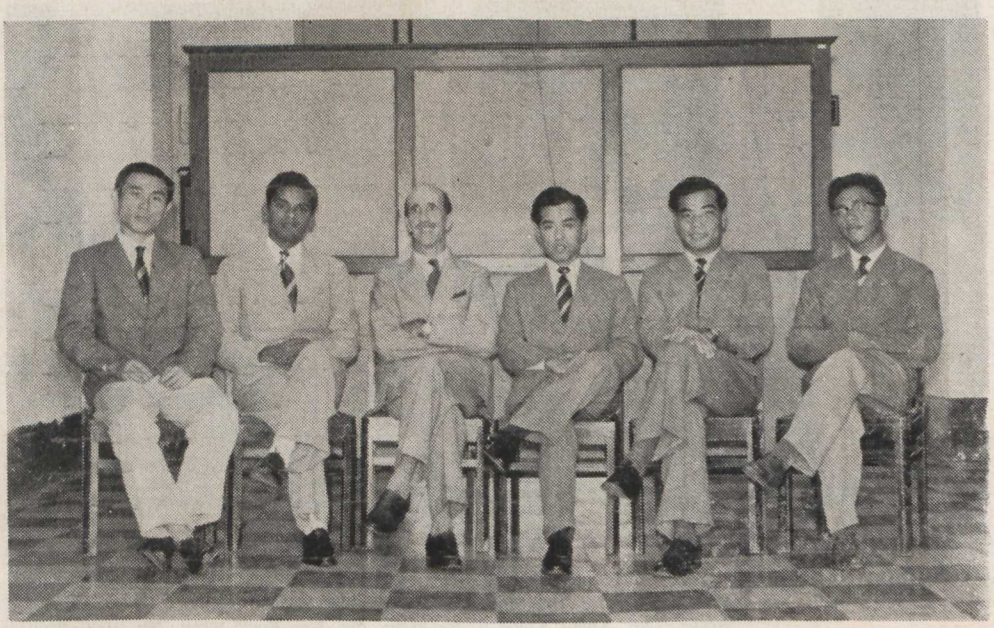

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The Serdang Sun

No. 4 MARCH 1956

EDITORIAL.

We take great pleasure in presenting this pre-Silver Jubilee Publication of "The Serdang Sun" and are indeed honoured to include a Foreword in this edition from Inche Abdul Aziz bin Ishak, the first Minister for Agriculture, Fisheries and Forestry, in the Federation of Malaya.

The world to-day is experiencing an ever-changing period, when changes of all kinds are taking place. In Malaya too at the present time, great changes are taking shape in the country's stride towards an independent and Malayan nation and we welcome the great overwhelming victory of the Alliance Government under the leadership of Tungku Abdul Rahman, the Chief Minister of the Federation of Malaya. We are glad to see that the Alliance Government has given top priority to Agriculture in its manifesto and has crowned its aims by the appointment of Inche Abdul Aziz bin Ishak, as our Minister for Agriculture.

It is indeed a regrettable fact to hear that in a country like Malaya, which is already well on its way to independence, people still do not care to spare a thought for the natural resources and the agricultural industries which are connected with the country's economy and are vital to any nation.

The general concept among the majority of people here, is that agriculture is merely 'manual' work and they fail to understand the significance of the term. Such thoughtless notions must give way to worthwhile ones and unless this is achieved we cannot go very far. If for a while our minds are cast back to the beginnings of the very dawn of civilization, when man first selected the most desirable plants as they were growing wild, and cultivated the fields using the most primitive stone implements and how from then on the cultivation of the land has been progressing through the ages, the importance of agriculture cannot be ignored. In short, it is the art which feeds the world.

It must be borne in mind that agriculture is our life preserver and a very important combination of art, science and economics. It embraces theoretical knowledge as well as practical work. To-day, agriculture is not the same as what it was in the days of our primitive forefathers, but as ages passed, scientific agriculture is slowly and steadily taking over from the old methods of cultivating the land. There is now not only a need for farmers to be brawny but they must also be brainy too.

In fact, an agriculturist's profession commands a varied knowledge on a number of subjects, such as chemistry, botany, zoology, genetics, animal husbandry, physics, principles of agriculture, entomology and agricultural engineering, so much so that specialization by an individual in all branches of agriculture is not practicable. Universities and Colleges of Agriculture all over the world, cover a more or less general course in agriculture, so that when a student goes out into the field, he may advise on problems that may arise in the farms.

About a quarter of a century ago, in 1930, the College of Agriculture was born and during its period of existence, has helped the dissemination of agricultural knowledge to the villages, kampongs and to every part of the country and Borneo. Being the only one of its kind in Malaya, the College has served a great purpose and is now looking forward towards another important development—the birth of a University Faculty of Agriculture. Perhaps, the absence of an Agricultural Faculty in the country accounts for the lack of interest in agriculture among our youths.

If this fervent hope of ours materializes in the near future, it will contribute towards a sounder structure in the economy of the country and achieve for the peasants and the people in general, a better standard of living.

As to the question of site for the establishment of the Faculty of Agriculture, Serdang is the best answer. The Agricultural Department has undoubtedly wisely chosen the present College of Agriculture in a central position in Malaya, besides being in the neighbourhood of the Federal Capital of Kuala Lumpur. This is the most ideal spot for the Faculty and an extension to the present College buildings will easily bring forth our long awaited Faculty. So too, the Faculty of Engineering could come up in Kuala Lumpur.

Recently, we are glad to hear the birth of a 'Newsletter' of our Old Boys' Association in Singapore on the 1st July, 1955. Our Alumni Association, College of Agriculture, Malaya, South Branch in Singapore is now doing a splendid piece of work through their new organ to communicate and strengthen relationships with the graduates who are to be found all over the country.

The College of Agriculture will be reaching its Silver Jubilee Anniversary, some time at the end of the 1955/56 Academic Year and we take great pleasure in inviting parents, graduates and friends to the College, to commemorate this grand and historic occasion. It is hoped that all our graduates will be present, when we shall have a family re-union.

In conclusion, the Editorial Board wishes to express its appreciation and sincere thanks to the Minister of Agriculture for his Foreword to the Magazine, the Principal of the College for the Message and for his kind advice and assistance, to the Old Boys for their generous contributions in the way of funds and moral support and to all students who have helped to make this edition what it is.

Two members of the College staff left us during the last academic year. Che Mohd. Rashid has entered the field of politics and Che Ariff bin Abdul Rahman has gone on promotion to Perlis.

We wish them every success and good luck.

We welcome Che Abdul Hamid bin Haji Hussein to the College staff.

— Ed.

PRESIDENTIAL ADDRESS.

It is indeed a pleasure and a privilege to give an address through the Union's magazine. This magazine is the medium through which the public is kept informed of the various activities that are carried out by the Students' Union of the College of Agriculture, Malaya.

In the past few months the Union has made great strides in its various fields of activities, particularly those of social and sports, which have resulted in an increasing public attention and interest towards the College. Our success should be attributed to the never failing co-operation and support of the Principal, members of the staff and last, but by no means least, members of the Union. To those of you who have helped in the progress and advancement of the Students' Union goes my sincere gratitude. I hope you will continue to play your part so that we will be able to achieve the many worthy aims and objects which we hope to achieve.

It is indeed a very sad state of affair that the agricultural profession in this country has not earned the degree of importance and popularity which it rightly deserves. For many years agriculture in this country has not appealed to our young Malayans who seem to think that the profession is an undignified one. They prefer a profession that gives them "respect and dignity." But, I am afraid this is a wrong concept as there is as much dignity in tilling the soil as in holding a pen, a fact which many have failed to realise. Our youths should also remember that "they will deserve more of their fellow men than many of the white-coloured workers, by making two ears of padi or two blades of corn grow where one grew before." Let us therefore hope that there be a change of attitude towards the agricultural profession ; the sooner the change the better it is for them and the country.

As students of Agriculture, I should say that we have taken a step in the right direction, a direction which more should follow. We are the very few, among our educated youths of this country, that are prepared to "root" ourselves to the soil and to serve the country and the people. To-day, we are better off than those white-collared workers in that we are theoretically and practically well off. The time has come when the country realises the need for more practical men to open up our agricultural resources. As students of agriculture, our services will therefore be a great asset to the economic and social development of the country.

When we leave this College to serve the country and the people we will be confronted with various tasks and problems, not only in the society of the illiterate but also of the literate. But, just as we have prepared to accept this hard life of an agriculturist we should also be prepared to face these tasks and problems with courage, perseverance and tolerance. While we are at the College, we should take full advantage of whatever facilities that the College and the Students' Union have to offer us so as to train ourselves for the great role we are going to play when we leave the College.

KOH THEAM HEE,

President,

College of Agriculture Students' Union.

THE FUNERAL DIRECTOR

By J. Chattaway

It was broad daylight when I first met him. I don't suppose that I should have noticed him coming out of one of the little houses lining our village street, if he had not been wearing full mourning dress : striped trousers, black coat and—good heavens, yes, a top hat. I was in a hurry, for it was nearly nine o'clock and I had only a few minutes to catch the bus that ran through our village. So, as I walked past him, I did not see his face, for his back was turned towards me, as he was carefully closing the door. At the corner at the end of the street, I glanced back curiously : it was not often that one saw an under-taker in our little village, for we all seemed to live remarkably long lives. In fact, I had never seen one during the war; and I was surprised that they still wore the regulation funeral dress. But he must have reentered the house, for he was no where to be seen.

I fully intended to ask my aunt about it when I returned home that evening, but she forestalled me. "Such an excitement, dear. We haven't had anything like it since they arrested the vicar, thinking he was an enemy spy. You know, all this business about parachutes and wearing funny clothes. Poor man he was so embarrassed, having to ask Col. Watson to come all the way to identify him. But what was I saying: Oh ! yes. Mrs. Merriwether. Poor woman : and living all alone as she did. I always felt it was't wise. But there you are, she would have her own way. Such a shock for her daughter finding her there when she came to visit her off the bus this morning. And now, they say, there'll have to be an inquest; because she hadn't been seeing a doctor or anything. But I'm so glad you had such a nice time in Colsford."

By the time I had discovered that old Mrs. Merriwether had died that morning, and had been living in one of the houses in the village street, I quite forgot to ask who the undertaker was, and I suppose that I would never have thought about the matter again, if it hadn't been for an odd occurrence that happened when we were in Gibralter. It was quite late one evening, and we were waiting for a heavy aircraft to come in to the airfield there. There were several due and they would probably be rather short of fuel, so the runway had to be kept clear. The first one landed all right and I began to think that it would be an easy night and to wonder if I could ask the Duty Officer whether I could go off for a meal. I was on the point of asking him, when the second aircraft came in and, as it touched the ground, one wing seemed to drop and the whole aircraft lurched, spun across the runway and crumpled as we watched.

We were down the control tower steps and into our jeep in just about the time that it took the fire engine and ambulance to turn onto the runway, and so we reached the crash almost as soon as they did. The aircraft by then was well afire, but as our vehicle pulled up, I thought I saw a figure walking away from the wreck. Even with the light of the fire, it was too dark to recognise any details, but something in the way the figure stood reminded me curiously of the undertaker I had seen outside Mrs. Merriwether's house. There was nothing that I could do, except make a hasty search in the hope that one of the crew members had escaped from the crash. But there was no one : all the crew had been killed and I was forced to conclude that the figure had been a hallucination.

Still, it led me to make enquiries when next I went on leave. I had only a few days, for I was being posted to Iceland. My aunt was interested, but vague : "No, dear. I don't think I do remember who arranged the funeral. Wasn't it old Mr. Pedley from Colsford ? But he always wears a bowler : or am I thinking of his brother, the chemist? Perhaps it will tell us in the local paper: I think I have it somewhere— I know one should always put them out for salvage, but I do like to keep the local paper : its so nice to keep the news of your friends." She brought me the local paper, but there was nothing useful : the undertaker's name was not mentioned. However, one odd item in the description of the inquest struck my eye. The doctor, giving evidence of the time of death, said that it must have occurred some time between half-past eight and nine o'clock in the morning. I went down to the village to see if I could identify the house where I had seen him, but I couldn't be sure that it had been Mrs. Merriwether's. It may only have been a coincidence: perhaps someone from the house next door.

But there could be no coincidence about the next appearance. It was at dawn and he was standing just beside our aircraft, which we were to take off on a patrol in the North Atlantic. I was the first one to get out of the truck which had brought our gear out from our quarters and, as I climbed down, I saw, distinctly through the thick morning mist, his striped trousers and black coat. I could even see his black cravat and what seemed to be a pearl-headed tie pin. Only his face was hidden by one of the propeller blades. As I stared, the mist suddenly thickened, as it can do at dawn. "Hallo, what's the matter with you ? my pilot asked. "Seen a ghost ? You're as white as a sheet." I looked again, the mist had cleared once more, but there was nothing to be seen. I replied slowly : "Do you know, I believe I have." Of course, the real trouble started when I refused to fly in that aircraft. I don't know what would have happened, had it not been for the fact that the standby aircraft was at full readiness, because our aircraft had earlier developed a minor engine defect, which had been corrected just before we arrived.

So the Duty Officer grudgingly allowed us to take the standby aircraft. We were delayed before take-off, to allow an American aircraft to come in. There was a very bad crosswind on the runway, and the American had difficulty in landing. One of his undercarriage legs buckled and slewed him right across the airfield at eightly miles an hour. He crashed into the aircraft that we should have taken. There was only one casualty : one of his gunners had not been strapped in, but the American's starboard wing sliced clean through the navigator's cabin, where I should have been sitting.

Since then, I have only had this hallucination once. It was on one of the most dangerous roads in the Federation, and I was travelling in a car, just in front of three armoured vehicles. As we turned a corner, there he was : standing quietly by the side of the road, an incongruous figure, at the jungle's edge and in the early morning sunlight. He might have been a city business man, on his way to his office from the suburbs. It was his top hat that was really startling: jet-black against the streaming green of the jungle, it produced the same shock of surprise that one would experience on seeing a naked man in a cinema queue. I had already changed down into second gear to turn the corner, so, when I saw him I thought: "Now, I will see your face...." and accelerated hard towards him. Though he was turned towards me, his face was quite unsubstantial: in some manner the bright sun falling on it, produced a haze upon it like the shimmer on a distant road. My car could accelerate very fast : I had just reached the fifty mark, with the engine screaming at full speed and could almost distinguish his features, when, suddenly, a machine gun opened up from the bank above me. One bullet went through the windscreen, shattering the Triplex glass into an opaque film ; two more whipped through the petrol tank at the rear ; and a fourth nicked the rear tyre, luckily without bursting it. The main stream went, I imagine, into the jungle just behind us. Had I accelerated just an instant later, it would have ripped through the body of the car, killing the lot of us. As it was, I was able to pull to a stop about a hundred yards down the road. We jumped into the ditch and worked our way back towards the battle. By the time we reached the scene of action, the terrorists had retreated into the jungle leaving one man, killed by the fire of the leading vehicle. The figure that I had seen had again disappeared.

I sometimes wonder when I shall see him again : it might even be standing just behind one of you. I wonder, too, what will happen when I see his face clearly. But most of all, I wonder who he is.....

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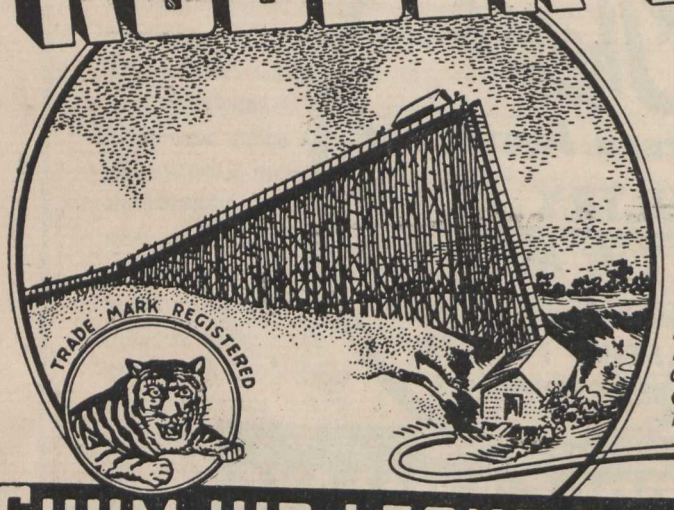

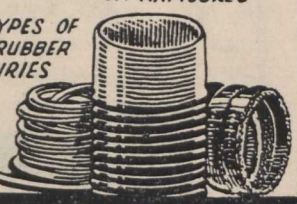

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A TOUR TO INDONESIA.

By Chua Hood Chuan.

Recently, a group of the Pan Malayan Students' Federation members were kindly invited by the P.P.M.I. (Students' Union) of Indonesia to tour their country. We greatly appreciate their hospitality. This was a goodwill and educational tour, which lasted about a month. The party to Indonesia consisted of two members from the College of Agriculture and twelve from the University of Malaya.

Being students, we have to admit that we were not very well off, thus the cheapest means of travelling to suit our purse was by boat, which cost us only twenty eight dollars each. We had a wonderful journey, which took us two nights and one day. We had a nice time after making friend with the ship's Captain, who allowed us to move freely in the ship, till we reached Djakarta.

Djakarta, the capital and the biggest city of Indonesia with its two and a half million people, did not impress us up to our expectations. Any way we wish to thank President Soekarno for having kindly invited us to his Palace to witness the Tenth Anniversary of the Independence Day celebrations. No one can deny that the city is big, but the conditions and living standards are rather low. Many a sight in the city is undignified. The "scenic attraction" of the Molevliet Canal, which runs through the heart and major roads of the city, needs mention. Here, men, women, and children had their free bath, washing clothes and treated it as a public swimming pool as well as a sewage system. They even went to the extent of bathing in the nude or semi-nude. We hope that the Government will do something to improve these conditions. Nevertheless, Djakarta has fine buildings of importance, such as the University of Indonesia with Arts, Law, Economics and Medical Faculties, accommodating thousands of students.

After staying for five days in Djakarta we went up to Bogor. It has a very pleasing and cool atmosphere where the Faculties of Agriculture and Veterinary Science stand. Praise and admiration were aired, when we visited Kebon Raja, the Botanical Garden. Indeed it is magnificent and we could not help but to say that it is much more impressive than that of the Singapore Botanical Garden.

Our next station was Bandung, the Paris of Java. It is on a plateau, about two thousand feet high, making the weather chilly. Amusement facilities in Bandung are plentiful, while interesting places can be reached within short distances. We had also the opportunity of seeing Tangkubanprahu the living volcano, water falls, hot springs and educational institutions.

We then proceeded to Jogjakarta, an old and historical town. The people in this town are more religious than elsewhere. One can find the Christians, Muslims, and other denominations of religions living and studying side by side. In this historical town are gigantic Hindu Temples, such as the famous Borobudur and Silva Temples. These were erected as early as the seventh century. In the centre of the town stands the old Sultan's Palace of seven chambers. It is a wonder how the people could build this artistic and well-planned Palace.

On and on we travelled till we arrived at Soerabaja, another big city of Java. This is purely a business centre, like Bandung and Djakarta. On its outskirts lies the enchanting Malang, where there is a lovely swimming pool with sparkling fresh water from the hill sides. This is a perfect resort.

Bali Island was our last station. It is an island where the beauty and charms of nature are unaltered. One might say that it is uncivilised for women to be unclothed even of the upper portion of their bodies. However, they have a totally different outlook. To them it is a healthy way of life. Their simplicity and sincere hearts know no evil. Thus, credit should be given to them for their simplicity and naturalness.

Now let us survey the agricultural side of Indonesia. The Government is taking a keen interest in providing the younger generation with every facility in the training of modern and scientific agriculture. At present, they have three Faculties of Agriculture, issuing the Agricultural Engineers' Degree, which is equivalent to the Bachelor of Agriculture Science (BSc. Agric.). The course takes five and a half years. The larger faculty is that of the University of Indonesia, which is situated in Bogor and is about 35 K.m. from Djakarta.

The number of students is increasing every year. This leads to great competition and only hardworking students would be successful. The University has to face the problem of recruiting staff. Long term service is difficult to get. As a result of this there is a constant changing of tutors. The Government hopes to recruit more trained men in the near future. At present, the University of Indonesia is seeking affiliation with the University of California in the United States of America with the hope of exchanging Professors between the two Universities. Besides, students from Indonesia can be sent to continue their studies in America. The teaching mediums are Indonesian, English, and Dutch. English is being used, because the tutors, besides the Dutch are Americans and Germans and the textbooks used are of English version.

Indonesia being an agricultural country is self-sufficient in most of her basic needs. This is largely due to her rich volcanic soil. For instance, padi is being cultivated all the year round. The Island of

Bali is a good example, where such a practice is carried out. In other areas, intensive farming is practised to help to boost production for her population of eighty two million people. With such an enormous number, the land is becoming overcrowded, resulting in the intensive use of the available agricultural land. This has led to the practice of inter-cropping and catch crop. Produce by such means are peanuts, soya beans, maize and tapioca. The land is never allowed to lie fallow during any time of the year. Thus, practically the whole of Java's cultivation of one kind or another is continuously carried out. When one travels either by road or railway round the island of Java, one will never miss the sight of padi fields. In fact, from the plain to the high land, and from inland to the shore, the Indonesians will till their land and ensure good returns. The Irrigation Department's intensive work has also enabled the farmers to work more efficiently.

Indonesia imports very little fruit, for she has plenty of bananas, papayas, mangoes and other local fruits. Vegetables too are grown in large quantities and part of her national revenue is derived from the export of this commodity, usually to Singapore. Even the tabacco the Indonesian smokes, is of local manufacture. The famous " tembakau Java " is exported to Malaya, fetching a high price. Tea and coffee, are also locally produced. Another of her valuable crops is sugar cane, of which a large quantity is exported.

Besides their rich crops, they do raise animals for meat. Pig breeding is important in Bali Island where one can find them roaming everywhere, even in the market places. Again, Singapore is the regular customer. Their Bali cattle are well known among farmers and the Federation is importing a large number of them to improve our stock, particularly for meat production. Goats and sheep are found all over Indonesia. Horse breeding is also common, but they are chiefly used for draught purposes.

After studying the Indonesian ways of life, one has, but to admire their spirit. Throughout our tour we were met with friendliness and hospitality. Never in any place of our journey were we disappointed. If we, the Malayan people would only work as the Indonesian, not thinking in terms of ourselves, but for our country, we would develop Malaya better than she is today.

EDUCATIONAL TOURS AND AGRICULTURAL EDUCATION.

By Koh Theam Hee.

The College of Agriculture at Serdang has often been referred to as the only institution in this country which caters for students for a higher education in Agriculture. Students studying at the College come from not only the various States and Settlements in Malaya but also from South East Asian countries, like Borneo.

At the moment there are two courses of studies at the College, the Diploma Course and the Certificate Course. The former takes three years while in the case of the latter, the period of study is only one year. A student taking up a Diploma Course will have to study a great many subjects ranging from basic sciences, like Botany and Zoology during the first academic year to more specific subjects like Plant Breeding, Genetics, Entomology, Animal Nutrition, etc., during the second and third years. In addition to theory the student will also need to do a full amount of practical work during the three years. In Agriculture, practical work cannot be divorced from theory as one is complementary to the other. Another interesting and important feature included in the training is the educational visits and tours, sponsored by the College to the various places of agricultural interest in Malaya. The value of such tours and visits will be assessed in the subsequent paragraphs.

One of the main reasons why such instructional tours and visits have become a necessary part of agricultural training, lies in the fact that the students are able to see, observe and study, on the spot the more specific types of work, such as experiments and research on the various field crops, carried out by the Department of Agriculture. At the padi Test and Experiment Station, for example, the students see for themselves how the various facts and principles related to rice breeding are being demonstrated. The students are thus shown how theoretical knowledge could be applied to practice. The value of such a tour is further enhanced by the fact that during the tours, the students also take full advantage to study the various systems of agriculture as practised in this country ; from small-holdings to large estates and plantations. Such a knowledge of the various economies, which every student of agriculture should be armed with, could not possibly be obtained by merely reading text books.

Of late the Final Year students of the College, accompanied by a Senior Lecturer, made a week's tour of Teluk Anson and Cameron Highlands. At Teluk Anson the party visited the citrus farms, the Jendarata Estate and the Kuala Bernam Coconut Estate.

The citrus farms, located on rich alluvial soil, perhaps produce one of the best Mandarin oranges cultivated in this country. Here, the use of organic manure in the form of prawn dust, well-rotted fish and urine are are extensively practised by the Chinese orchardists. At the Jendarata Pineapple Plantations, the students studied the various stages of production, from cultivation to canning and packing, of pine-apples. A day was spent at the Kuala Bernam Coconut Estate which has an extent of two thousand acres. The students travelled throughout the estate by rail. Apart from studying the methods of coconut cultivation and toddy production, the students were also shown the intercropping of coconuts with cacao and pineapples. In Cameron Highlands our party visited the tea plantations. Highland tea, one of the important economic crops of Malaya, is cultivated on steep hill slopes which extend in thousands of acres. At the tea factory the students were shown how commercial black tea is manufactured on a large scale. At the Department of Agriculture Station the students were given a talk by the Agricultural Development Officer on tea cultivation. The students were also demonstrated the proper techniques of tea plucking and pruning. In addition the students made a number of visits to the various farms, ranging from vegetable gardening to flower production.

From the foregoing description it could obviously be inferred that the students had many things to see and learn during such an educational tour. The students, beyond doubt, derived material benefit and knowledge and the experience was a lasting one. Since such tours have proved to be very beneficial to agricultural training, it may perhaps be desirable, from an educational standpoint, to extend similar tours to South East Asian and other neighbouring countries. By so doing, the students are able to avail themselves of the opportunity of studying the agricultural problems and developments of other countries as compared to those in Malaya. An example may be quoted here when six students from this College organised a tour on their own initiative to Bangkok. There the students visited the various places of agricultural interest and studied the systems of agriculture practised in Thailand. Included in the tour were visits to the University Agricultural College of Kasetsart, and Department of Agriculture, Bangkok. It may however be argued that the expenses incurred in such a tour would be heavy, but, on the other hand, experience gained from it would more than compensate as it would not only be an asset to the students but also to the country.

CIVILIZATION IS A FAILURE !

By Tun Isma Kedah

Is civilization a failure ? My answer to this question will be in a firm affirmative. This is a very controversial subject and it cannot be treated superficially. At a glance, the man-in-the-street will stubbornly maintain that civilization is a success and any opposition to this popular notion will only land you in trouble. But, as everyone is entitled to one's own thought, I therefore dare commit (if at all I have to) myself.

The apparent improvement in our way of life or society brought about by the so-called modern civilization, is merely in external matters, while the spirit of society (social feeling) is degenerating. Everybody should be self-reliant, but socialism unfortunately proves to be the enemy of self-reliance. It results in the lazy and inefficient living or rather depending upon the industrious and capable. Many a man spends so much of his time in considering other people's thoughts or ideas, that he loses the power of thinking for himself. As a result he takes what other people think as a gospel truth.

It is a common saying of modern days that " the rich are slaves of their own wealth and prosperity while scientists are the slaves of their own creation." In short, civilization is just another form of slavery ; the striking difference between the present day slavery and the slavery of the olden days is that the former is an organised one. For instance, any man with an adequate general knowledge, knows the atomic bomb and realises its importance. It is a modern invention all right, but is it beneficial to the human society ? The dangers of atomic warfare can never be over-emphasized and the horrors of Hiroshima and Nagasaki could be repeated as easily in any of the main cities of the world. Undoubtedly, the Atomic Energy is used in large quantities for medical purposes, but the misuse of atomic energy will probably do more harm. Man, nowadays, does not live " naturally " as civilization encourages artificiality of life, tyranny, hypocrisy and misery. Man tries to become rich anyhow, even through dishonest means and gambling, which is undoubtedly a national evil. Any " wholesome " trade encourages gambling and increases a mania for speculation ; thus so little indeed of the whole business is " legitimate." Gambling will eventually land a man into a life of misery and hardship, especially when his property is lost to another. In short, any game of chance appeals to avarice and sloth. The law of competition is a modern belief, under which the good and the honest are driven aside. It is not the fittest who survive ; it is not the best man who wins ; but those who have exceptional opportunities and are unscrupulous. Dishonesty is the principle of getting rich—at least nowadays.

Every man wants to live in happines and this can only be found in the home, in friendship and social intercourse, all of which demand considerable leisure, but unfortunately, modern civilization has taken away all leisure. We are so occupied with our work (earning a living and the like) that we have no time to live in the right sense of the word. Further, civilization has brought us back to the life of 50 B.C., when man lived, scarcely covered, except with barks of trees. A man from that century B.C., would not be surprised to see the scarcity of clothes worn by the man and woman of today. The 20th Century man spends his leisure in cinema halls, night clubs and the like. The modern life depends (for its popularity) on pure erotic sensation—the exotic walk of Marilyn Monroe, the curvaceous Diana Dors and the shapely legs of Betty Grable. The whole range of human passion is acted before the eyes of young people, who, sad to say, are the " frequenters " of such films. This, thus results in unripe minds getting the knowledge which they are not supposed to know. Consequently, young minds are corrupted and are subject to vices. We pride ourselves in the abolition of slavery, but little do we know that civilization has enslaved us once again. Civilization, therefore, is a failure and as long as we follow the present trend of civilization, we cannot dream of improving ourselves.

A life of sacrifice is the pinnacle of art and is full of true joy.

— Mahatma Gandhi.

Science emerges from the other progressive activities of man to the extent that new concepts arise from experiments and observations, and the new concepts in turn lead to further experiments.

— James B. Connant.

MARGARINE TO OUST BUTTER !

By Yeow K. H.

Ever heard of synthetic butter versus natural butter ?

Malayans often hear of the natural-synthetic rubber competition, a problem faced by the men who make rubber the mainstay of Malaya's economy. The threat of synthetic rubber becoming dominant over the natural one has indeed served warning : the days of the natural rubber industry are numbered. However, let not this disturb us, for once the Malayans are now becoming conscious of the importance of diversification of industries. ' An eye for an eye, a tooth for a tooth'—Malaya's rubber industry is being challenged by the synthetic rubber industry, but why not Malaya follow suit ? Starting on a small scale, let Malaya produce synthetic products too, and let her boost the synthetic industry—Margarine.

Margarine is, in its true quality, synthetic butter. Margarine is a mixture of vegetable oils or fats, specially blended to simulate butter. The vegetable oils are pressed or extracted from coconut, peanut (or ground nut), palm oil, cotton seeds and soya beans. These liquid oils are hardened by hydrogenation, which is a process of hardening. By controlling the degree of hydrogenation one can make a fat hard or soft.

In a country where the climate is always hot the blending of the hydrogenated oils is of great importance, because this will decide the final hardness and texture of the margarine which must be firm in spite of the high temperatures. In order that the margarine can have a butter-like flavour 15% of milk, which has been specially treated to bring out its flavour, is added to the blended fats. This milk serves a double purpose, besides giving margarine the flavour, it also helps to emulsify the fats. Butter is in fact an emulsion of butter-fat in water and so is margarine. During the process of emulsification vitamins A and D are added; at the same time colour, to give it the butter appearance, and salt for taste are also added. The final result shows that in taste, looks and nutritional food value it is the same as butter. In other words, margarine prepared by the above method is as good as natural butter, since their food value is the same. However, to say that margarine is not in any way inferior to butter, and that natural and synthetic butters are alike in quality, is really untrue. It must be remembered that butter is truly an animal product, and is therefore considered ' natural '. Margarine is altogether a 'copied' product. Until now scientists have done all they can to improve the quality of margarine but in spite of this, butter still proves to be superior in texture and consistency, palatability, taste and aroma. Is this a setback ? No. It is only a matter of time. By and by the quality is being improved.

As regards popularity, butter is by no means favoured by the majority of people. Why should people favour this when the food value of both is the same ? Simple, the answer is PREJUDICE. On account of its very long history butter, was made use of much earlier than margarine, which came to be known only during the war. People are therefore prejudiced when thinking of making use of margarine.

Malaya is truly the home of the raw materials of synthetic butter. Annually she produces some thousands of tons of vegetable oils. Without doubt the tonnage of these commodities is still increasing yearly. Unlike butter, margarine can be manufactured directly from vegetable oils. Butter, on the other hand is made from milk, the latter being synthesised in the animal body from plant food. The animal takes in the food and converts it for human consumption, a process that is really wasteful because not all the food taken in is turned into milk—the material that is used for butter-making. Quantitatively, it has been compared on the basis of produce per acre, that is, an acre of dairy land compared with an acre of vegetable oil-producing land ; it is found that three times more margarine than butter can be produced per acre of land.

As we can see that the production of butter is by far more laborious and expensive, Malaya can certainly take advantage of margarine production.

In every way agriculture is the first calling of mankind ; it is most honest, the most useful, and consequently the noblest which he can exercise.

— Rousseau—Emile.

A GARDEN PEST — THE GIANT SNAIL

By Lam Peng Sam

The Giant Snail, technically known as Achatina Fulica (Fer.) may rightly be branded an undesired "immigrant" into this country from its native home, Africa, in as far back as 1922, when its existence in the country was first known to the Department of Agriculture. This gastropod's efficient and successful propagation of the species has helped it to spread epidemically to all the other countries of South East Asia. During the first quarter of the century depredation caused by this African Snail was considered unworthy of any scientific attention. But to date the imminent danger has assumed great economic importance, so much so that a great variety of poisonous mixtures has to be concocted to put a check to its epidemic spread.

This gastropod is an added item to the list of allied pests, the slugs, which have long been the hated elements to the local gardener or farmer. On vegetable crops the African Snail is undoubtedly a pest. The growing of certain vegetables has almost been brought to a standstill owing to its ravages. In rubber nurseries they are known to do considerable damage and the reasons are obvious. In mature rubber holdings they are found to 'drink' latex at tapping hours, or even go to the extent of eating the fresh cambium layers exposed, after tapping of the rubber trees. This latter case can cause great physical damage to the trees. Its rate of propagation is most prolific, typical of most of the Invertebrates, and as the snail population per acre of land can range from 40,000 to 50,000, readers will imagine the ravages that can be done to the young rubber, the vegetable crops and to flower gardens. In cereal crops, like rice, little or no damage has been recorded.

They are nocturnal creatures, feeding only by night and in the early morning. During the day they retire to all possible secluded and sheltered situations for example under hedges, below rank vegetation, beneath large stone crevices and the like. They are most active during moist weather, but when drought prevails they hibernate and even secrete, as required, a tough partition across the mouths of their shells. This cover is termed the hibernaculum.

A brief account of their prolific multiplication may be worthy of note. Eggs are laid in batches of 200 to 300 and they are deposited just below the surface of loose earth near compost heaps, under large stones or in crevices. If favourable climatic conditions prevail they (like large yellow peas with hard shells) hatch within 2 or 3 weeks after deposition. A moist environment may influence the length of the hatching period. The young emerge with their own shells and feed gluttonously at an early age. They can reach full sized adults, each

having the dimensions of 4-5½ inches long and 1½ to 2 inches wide, in one to one-and-a-half years. They even start to lay before they attain full size, but the number of eggs per batch retrogresses. These snails because they require an abundant supply of lime for the calcification of their shells always are on the search for materials having a coating of lime (white washed pots or walls) or anything made of lime. They may be recognised even amongst rocks and stones by the alternate longitudinal bands of brown and yellow, of their shell. These wavy bands are very distinct.

Control Measures

The controlling measures to combat these snails are varied, ranging from simple and common substances like wood-ash and copper sulphate solutions to highly complex chemical compounds like Meta Solid Fuel and other allied substances. Before attempting to relate the various chemical controls it would not be out of place to say briefly that Nature has lent a hand in suppressing these pests. The Giant Snails, like any other pest, have natural enemies of some sort or other, though not very numerous in this country. The most prominent of these are the predaceous insects, which devour the young or newly hatched snails. Others that assist in their suppression are birds, ducks and fowls.

The simplest and yet efficient measure to combat their prevalence over a small area is to place a mixture of wood-ash and saw-dust in the proportions 2: 1 in shallow ditches circling pots of plants or plots in vegetable gardens. This forms a very successful barrier to the passage of these gastropods. A solution of varying concentration of copper sulphate also proves to be very toxic to the snails. A 10% copper sulphate solution can be made by mixing 1 lb. of copper sulphate crystals in 1 gallon of hot water. Precautions should be taken not to make the solution in containers made of tin or iron as these two elements are capable of decomposing the copper sulphate. Copper or wooden vessels may be utilized. Seedbeds or flower beds can be efficiently protected by encircling them with a thick rope soaked in this solution. This rope can be pegged down in the night and be collected in the morning. Any snails coming into contact with this barrier will succumb to it. A rope well soaked in the solution will retain its efficacy for quite a time, but may be resoaked periodically if desired.

The standard treatment recommended for use against these snail pests, is Meta Solid Fuel mixed with bran mash. This compound was found to be the most efficient control measure. Meta in its pure state has no attractive power for members of the Mollusca family—snails and slugs. It is the bran mash which contributes most, if not all, of the attractive power. Hence, this meta bran bait is noted for not only its toxic properties, but also the attractive power to snails and slugs. The

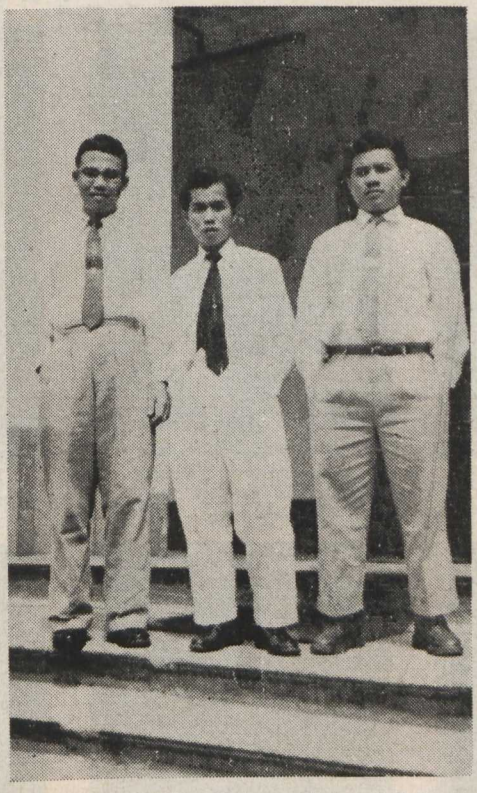
pests are rendered paralysed and unable to crawl away. Meta Solid Fuel bars are reduced to a powder and mixed with rice bran, the proportions being one meta bar to half pint rice bran. The mixture is then moistened in a bucket with water to a suitable consistency of a stiff mash, easily handled or capable of being moulded into small briquettes. These may be broadcasted or in a more economical way, placed at intervals of 3 to 5 yards throughout the infested areas. If the season is wet there is a likelihood of the briquettes being washed away, hence the importance of providing shields of bamboo slits or coconut shells for protection. The ideal time for application is before nightfall, keeping in mind their nocturnal habit of feeding. These briquettes should all be collected in the early morning, the reason being that meta proves not only toxic to members of the Mollusca family but also to domestic animals like dogs, cats and above all to poultry. The same briquettes can be used again for many more times, provided they are not too wet for handling. The success obtained by the use of this meta-bran bait has aroused great interest in Malaya regarding the economic possibility of using this compound to combat the Giant Snails in rubber estates and also in agriculture generally.

True science teaches, above all to doubt and to be ignorant.

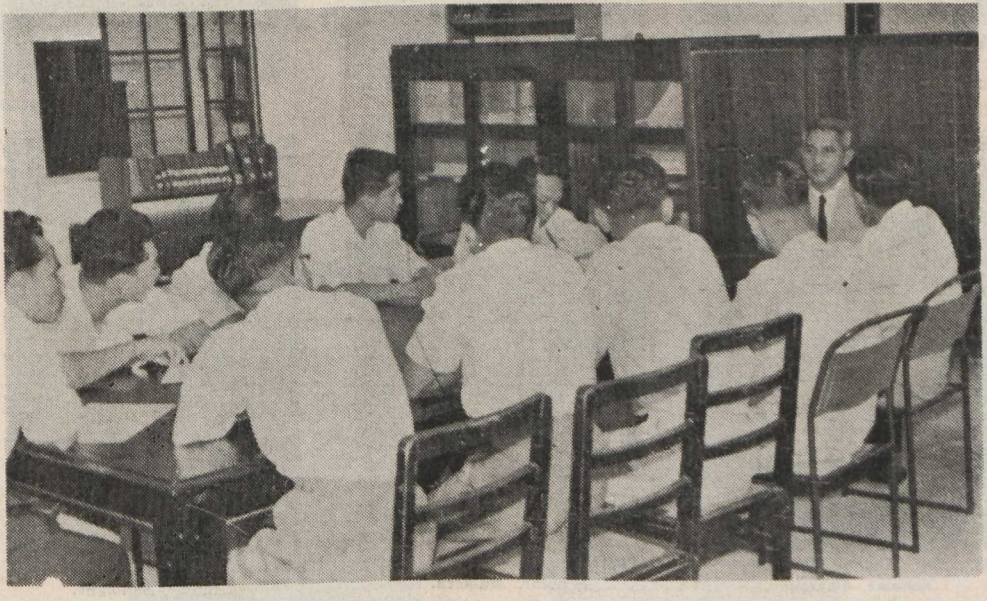
— M. de Unamuno.

Of all things from which gain is obtained nothing is better than agriculture, nothing more productive, more delightful, more worthy of a man or of a freeman.

— Cicero—De officiis.



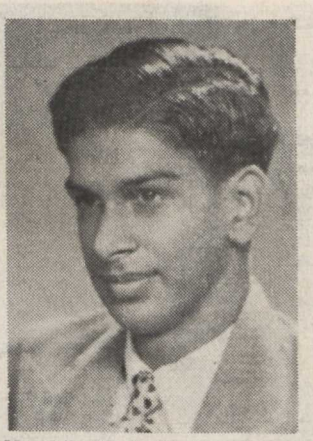
Our delegation to the Pan-Malayan Students' Federation Annual Conference held in Singapore, early this year. (Che' Mohd. Rashdan bin Baba is absent in the photo.)



The College of Agriculture Students' Union Council meets Inche Abdul Aziz bin Ishak, the Minister for Agriculture.

FINAL YEAR

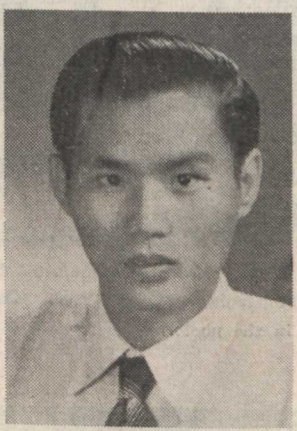
Che' A. Mazlan b. Mohd. Yusoff, R.R.I. Scholar, Perak. Sports Secretary Students' Union.



Mr. Ajit Singh, Major Scholar, Penang/Province Wellesley, Chairman, Election Sub-Committee.

Che' A. Rahman b. Jaffar, Major Scholar, Johore. Financial Secretary, Students' Union.

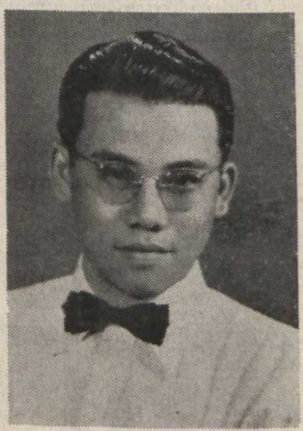
Mr. Chang Yew Hong, Major Scholar, Pahang. Welfare Committee Member, Students' Union.



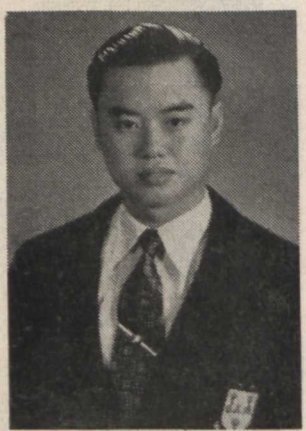
Mr. Goh Khek Boon, Major Scholar, Penang. Welfare Committee Member, Students' Union.

Che' Harun b. Arabee, Major Scholar, Penang/Province Wellesley.

Mr. Koh Theam Hee, Major Scholar, Pahang. President, Students' Union.

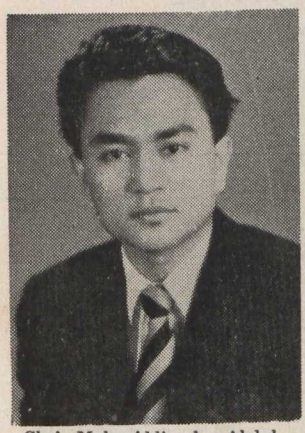


Mr. Lam Peng Sam, Major Scholar, Malacca. Secretary General Students' Union.

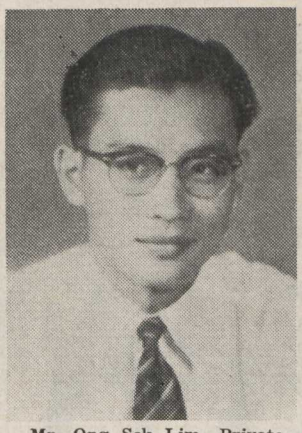


Mr. Low Tuck Peng, Major Scholar, Selangor. Body Building Captain.

STUDENTS 1953/1956.



Che' Mahayiddin b. Abdul Hamid, Major Scholar, Perak. Hostel Secretary, Students' Union.

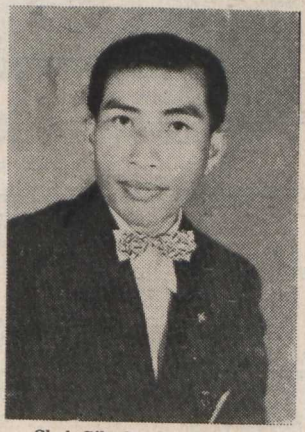


Mr. Ong Sek Lim, Private Scholar, Malacca. Welfare Committee Member, Students' Union.

Che' M. Indot. Major Scholar Selangor. Finance Committee Member, Students' Union.

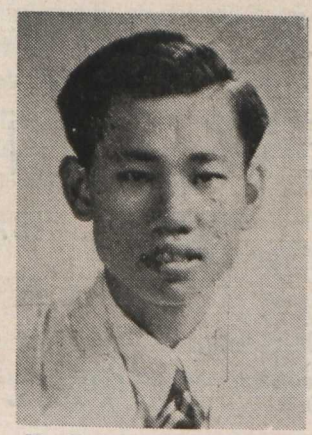
Raja Shaharuzzaman b. Raja Hussein, Major Scholar, Perak. Welfare Secretary, Students' Union.

Mr. P. S. Lingam, Major Scholar, Selangor. Finance Committee Member, Students' Union.



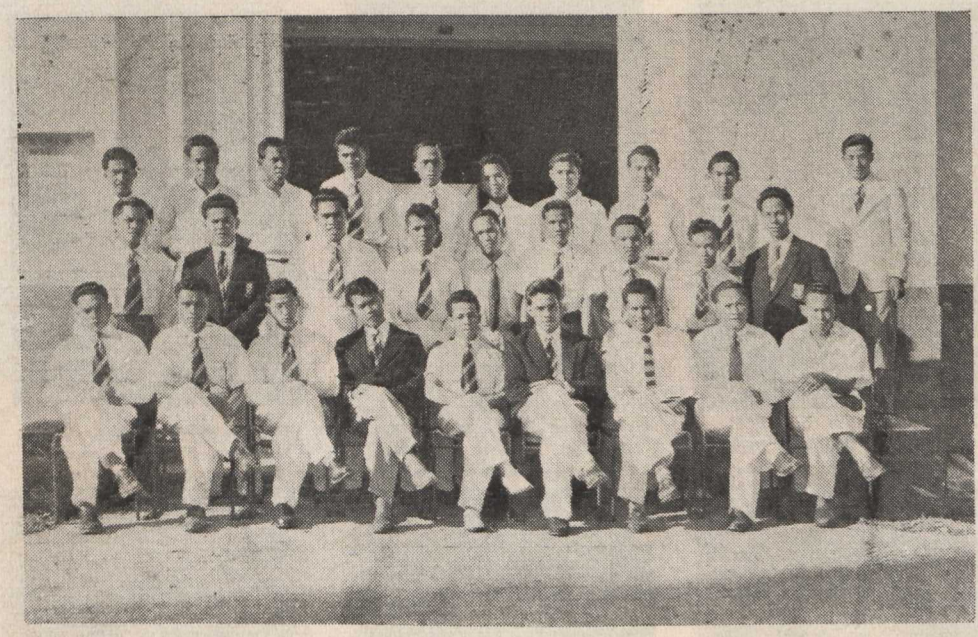
Che' Sikodol b. Magunting, Major Scholar, British North Borneo. Hon. Auditor, Students' Union.

Mr. Tee Thean Soo, Major Scholar, Penang/Province Wellesley.



Mr. Yeoh Chong Hoe, Private Scholar, Penang. President, "Agricultural Bias Society".

CERTIFICATE COURSE STUDENTS—1955/1956.



BACK ROW (L. to R.) Abd. Razak bin Abd. Rahman, Othman bin Hj. Ahmad, Mohamed bin Bakar, Mokti bin Husin, Md. Nor bin Ibrahim, Sihab bin Duhari, Hashim bin Mohamed, Talib bin Basir, Nayan bin Gembor, Tee Kok Kee.

MIDDLE ROW (L. to R.) Fedelis bin Insun, Borhan bin Mohd. Johan, Mohamad bin Salleh, Hamzah bin Bakar, Abd. Aziz bin Abdullah Sidek, Mohd. bin Chumat, Ismail bin Abd. Hadi, Abd. Malek bin Md. Ali, Ranek bin Maluddin.

FRONT ROW (L. to R.) Amir bin Ahmad, Mohd. bin Meon, Md. Idris bin Othman, Hassan bin Omar, Faisal bin Hj. Ismail, Syed Abd. Hadi bin S. Othman (Minor Course Representative), Zainal bin Yahaya, Sha'ari bin Md. Said, Abd. Manaf bin Abd. Rahman.

PROTEINS IN ANIMAL NUTRITION.

By Ong Yong Seng.

Proteins are substances which are very complex in character and are of high molecular weight. About one-fifth of the weight of an animal is made up of this substance. Apart from fatty and mineral matters, water, and a small amount of carbohydrates, the body of the organism is composed of proteins. They are to be found in muscles, tendons, skeleton, internal organs, nerves, hair and practically every part of the body. The most important constituent of protoplasm, which is associated with life, is protein, and it can be safely said that no living thing can exist without proteins — hence its importance in animal nutrition.

The animal body requires proteins for growth, for production, and for repair of waste tissues. To carry out all these fundamental activities, animals require amino acids, which are the units with which the protein molecule is constructed. But animals cannot synthesise amino acids as plants do, and have to obtain them either directly, as in the case of herbivorous animals, from the grass they eat, or directly, as in the case of carnivores, from animal proteins or flesh of other animals.

Unlike fats and carbohydrates, which are interconvertible to produce heat, proteins cannot be substituted by any other substance. Here lies the importance of its inclusion in animal diet, for animal proteins which are essential for growth and repair, can only be created from other animal or plant proteins contained in the food.

On digestion, proteins are being broken down (hydrolysed) to a mixture of amino acids, some essential and some non-essential, and it is the essential amino acids that are being made use of by animals to synthesise into proteins to build up the body. In general, animal proteins contain more of the essential amino acids than vegetable proteins. Thus, the biological value of protein food is dependent upon its amino acid composition. When a protein food undergoes hydrolysis during digestion, and the mixture of amino acids produced, corresponds both quantitatively and qualitatively with the animal requirements, then the protein food is said to be well balanced and is of high biological value. On the other hand, if the amount of essential amino acids produced is insufficient or lacking in any of the essential amino acids, the biological value of the protein food is said to be low. In general, animal proteins contain more of the essential amino acids than vegetable proteins.

In feeding an animal, if too much protein is used it is harmful, because protein unfortunately, cannot be stored in the animal body for

future use. Any surplus of essential amino acids and those which are not suitable for use synthetically, have to be got rid of from the body by a process called deaminisation—a process which involves the splitting up of the amino acid into a nitrogenous part and a non-nitrogenous organic acid. The nitrogenous part is excreted in the urine as urea, and the acid part is oxidised to release enegry. This splitting of the unwanted amino acids takes place in the liver, and it can be inferred that harmful effects will be produced on the liver if too much work is given to it by feeding the animal with excessive amount of protein. Thus, from the point of view of animal nutrition, excess of protein has a harmful effect on the animal. Besides, it is too costly to feed animals with protein as a source of energy and one should see that the right amount of protein food is supplied when feeding an animal.

Nothing is achieved before it be thoroughly attempted.

— Sir P. Sidney—Areadia.

A Man's greatness lies not in wealth and station, as the vulgar believe, nor yet in his intellectual capacity, which is often associated with the meanest moral character, the most abject servility to those in high places, and arrogance to the poor and lowly ; but a man's true greatness lies in the consciousness of an honest purpose in life, founded on a just estimate of himself and everything else, on frequent self-examination, and a steady obedience to the rule which he knows to be right, without troubling himself about what others may think or say, or whether they do or do not do that which he thinks and says and does.

— George Long.

BEGONIA AND CLERODENDRON.

By L. H. Kuo.

If you are interested in semi-indoor plants, there is a long list of them for you to choose from, but here let us discuss only two groups—Begonia and Clerodendron. They are very common and widely grown in Malayan homes and gardens. Some of them are very exquisite in foliage, while others have very dainty flowers. Although they are not true indoor plants they can adapt themselves to the semi-indoor mode of life. Morning sun or evening sun would help to keep them in healthy condition, and when they are placed indoors, their leaves and flowers will arrange themselves in such a mosaic position so as to receive maximum light which the environment can offer. It is also in this position that they look most lovely—therefore, it is not advisible to alter their position once they set themselves. Frequent disturbances will cause the plants to shed their leaves and refuse to flower—such is the response of plants!

The amount of light available to plants in a room is not so much affected by the windows, but the reflecting surfaces of the room. It is possible to increase the brightness of the room to three or four times by replacing the dull walls and furniture with white walls and highly reflecting furniture.

The idea of keeping foliage clean cannot be over-emphasised, but one should note that semi-indoor plants are receiving much less sunlight, and if their leaves are heavily covered with dust, the process of photosynthesis is not very efficient, and the plants are more likely to become etiolated. Sometimes etiolation would produce more artistic effect on the plants—but this is an unhealthy condition.

BEGONIAS (BEGONIACEAE).

This is a very large group of succulent herbs. Stems could be rhizomatous or creeping. In general, they are divided into two groups ; one grown for foliage, and the other for flowers. As Malayan species are mostly small flowers, we shall limit our discussion to foliage begonias alone which are the favourite of Malayans. (See Fig. 1).

Foliage begonias usually grow a great bundle of roots and this usually blocks up the drainage of the pot and exhausts the soil. It is therefore beneficial to some extent, to repot the plant—but great care must be taken not to injure any of the stems. When the plants have grown to a large size, about one to two feet in height, it is better not to repot, but very rich soil with a lot of well-rotted dry cattle manure should be applied.

BEGONIA AND CLERODENDRON

Photo by L. H. KUO.

Fig. 1. One type that belongs to Begonia coccinia group. The simplicity of the stems and the large prominent leaves make this plant beautiful for room decoration. It grows to a height of 2 to 3 feet.

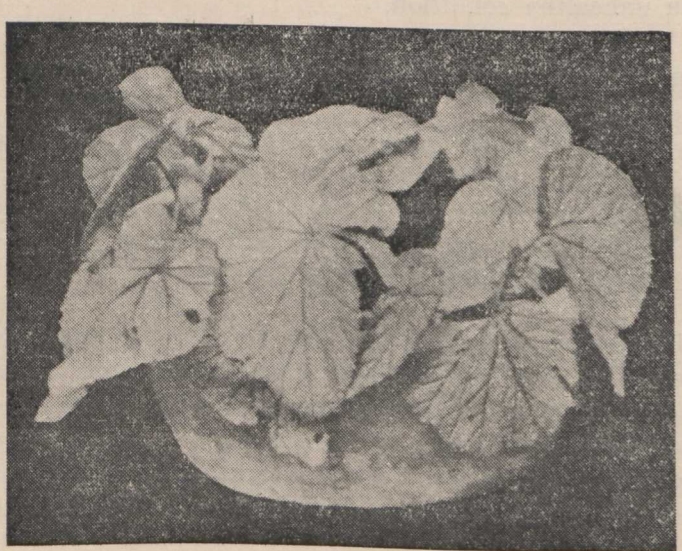


Fig. 2. Begonia cuttings. Note, that everyone of the cuttings is taken from a terminal shoot and two leaves are attached. The cuttings are put to strike in sand in a shallow pot. Proper watering should be carefully observed and as soon as the cuttings are ready they should be transplanted in proper pots. The spacing of the cuttings is sufficiently close to maintain high humidity.

A peculiar habit of foliage begonias is that they flourish far better in soil mixed with a high proportion of cow-dung and not in compost mixture, which tends to pack together and form a hard-pan. This seems to have an effect on aeration to the roots. The following mixture is a guide but modification must be made to suit the individual's condition with different types of soils having different constitution :

2 parts well rotted cow-dung

1 part broken pieces of brick

1½ parts burnt soil with a good amount of ash

½ part sand.

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5 parts

If the soil is low in phosphorus, a little rock-phosphate or super-phosphate can be incorporated at the rate of 1 to 2 ozs. per bushel of the above mixture.

Top dressing can be done, but organic manures such as sterameal and fish-water are very much better than artificial manure, like ammonium sulphate. In the case of sterameal it can be applied with one spoonful per pot, slowly forked under but do not stir the soil. If fish-water is used, make it into a very dilute solution. Other liquids such as rotted prawn dust and urine are no doubt good, but I would not recommend the use of it, as the foul smell would become intolerable if the plants were to be kept in the room.

PROPAGATION OF BEGONIA BY CUTTINGS.

The cutting is best when containing a terminal shoot and two or three large leaves (see Fig. 2). The reason is this : as soon as the cutting has rooted, the shoot can continue to grow, stimulating vigorous growth ; while in a cutting without a terminal shoot after having rooted, the plant has to exert a great effort to grow two or three side shoots and vigorous growth is temporarily arrested. This results in a longer period for the plant to establish itself and there is always a danger of dying back if the newly formed roots suffer from semi-starvation, as the leaves have now become poor and inefficient in food manufacturing. The plant may succumb if this condition is prolonged. In the former case when the cutting has become well established after transplanting into the pot, the terminal shoot can be pruned off safely to encourage side branching.

ROOTING MEDIUM AND WATERING

Cuttings can be successfully raised in sand with or without any application of hormone. The writer's personal experience inclines him to suggest that the use of hormone on succulent begonia stems is unnecessary, as begonia stems root easily under Malayan conditions, provided the cuttings are protected from strong sunlight and heavy showers. Sufficient light, however, must be assured. For a beginner, it would be better and safer not to use hormone, as incorrect application increases the chance of failure for the hormone speeds up metabolism and if too heavy a dose has been used, the plant dies simply because its life-process has been speeded up too much. The hormone has become a killer rather than a growth promoter. The plants should be given full sunlight as soon as they can stand it. This will make them hardy and so they do not die easily.

Watering is perhaps the most difficult task, as more often than not one commits the mistake of over watering. The base of the shoot (stem) rots, the roots (if any) die. In raising begonia cuttings, always remember that their stems are very succulent and watering more than necessary is harmful. Exactly how much water is needed can only be learnt by experience. To feel with the experienced hands the medium and the cuttings, the grower would be able to tell whether any further watering is needed—there is no short-cut for a beginner to gain this experience but to do it himself and learn from his mistakes.

BEGONIA REX

This plant can grow to a beautiful size in the sitting room. Many books have recommended that the propagation of this plant should be done with stems placed in shade, and not until the plants are well established can they be allowed to have full sunlight and if they are used for semi-indoor plants they are never put in full sunlight. I think that such a practice is not very beneficial. According to my tests, the cuttings of Begonia Rex can become hardy under full sunlight, provided proper moisture content is maintained. The following is the procedure :

The stem is directly planted into the required pot—no other transplanting is needed. Keep under shade for two or three days but not more than this period. Then place in direct sunlight with little shading. Water well so as to keep high moisture content. The leaves may droop but the plant will not die. In a few days all shade can be removed and the plant is now exposed to full sunlight.

Within a fortnight new shoots appear. This is a sure sign that the plant has become hardy and ready to shoot up new buds. At this stage it is beneficial to manure the plant fully. The plant will now grow

very well but the shoots and leaves are not very large, even though there are many of them. The leaves appear very greenish. The leaf-stalks are short and the plant as a whole does not look very attractive.

If you are now satisfied with the number of shoots and leaves, it is time to "bush" it up. Take in the plant and set it in the room where there is strong diffuse and reflected light. Give it a dose of liquid manure in a very dilute form for a few times. In a few weeks the plant assumes quite a different appearance. Leaf-stalks become lengthened, leaf-colour becomes deep purplish green with red colour beneath. The whole plant becomes very bushy and swells up giving a very luxuriant appearance. It will remain in this condition for more than a couple of months. (See Fig. 3).

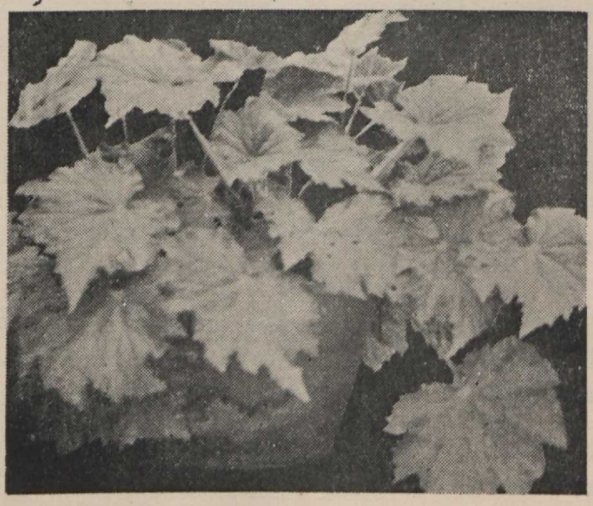


Photo by L. H. KUO.

Fig. 3. Begonia rex which has been grown in the method described and has been placed indoors for two months. Note the mosaic arrangement of the leaves, which gives a "well covered" appearance. It is most suitable when arranged with modern furniture such as fashionable radio and book-shelves.

CLERODENDRON

Most of this group are shrubs and a few climbers. Here, only one example will be discussed—the Clerodendron Thomsonae, common name being the Bleeding Heart.

Its place of origin is Africa. It is now well established in Malaya. The plant is propagated by cuttings. It flowers very early when the cutting has not grown to very large size, and it will continue to flower

for a very long time. If you desire it to flower after attaining a fairly large size, the flower buds can be pruned off. It is the delicate flowers that are most appealing. The corolla is deep red, contrasting with the swollen white calyx. (See Figs. 4 & 5).

The plant can be successfully raised in bottle culture (See Fig. 4) and used for table decoration. However, when the plant has adapted itself to a semi-indoor condition, it is not advisable to expose it to full sunlight again in an effort to stimulate the plant to flower more, as it will not be able to withstand the strong light and will wilt. The plant has gone weak in a sense and can only continue its growth in the semi-indoor condition. However, by changing the composition of the nutrient solution, one can stimulate either the foliage growth or flowering. But, this subject is beyond the scope of this article.

CUTTINGS.

For Bleeding Heart stems to root successfully, it is necessary to make cuttings from a matured stem ; the younger ones succumb to bad conditions easily and any effort will be futile in trying to make young cuttings root.

Quite different from begonia, the cuttings are better if they have their terminal shoots cut off. Two or three leaves must be left ; with healthly dormant buds which would be the future growing shoots.

The Bleeding heart is a rather hardy plant and the cuttings can root fairly well even in rather unfavourable conditions. If hormone is applied, rooting takes place more readily. In this case, beginners can quite safely use it without any fear of killing the plant, as the stems are of semi-hard wood.

Sand can be used for a rooting medium. Perhaps a little addition of burnt soil or well rotted cow-dung would help, as according to my own experience, the cuttings shoot up buds and leaves vigorously when the latter ingredient is added. No doubt those that strike in pure sand are good enough—I would suggest the addition of one part well-rotted cow-dung to ten parts of pure sand, which would give an extra stimulation of vigorous growth after striking has occurred.

Keep the cuttings moist but do not over-water and place under shade with a good supply of diffuse light. When the cuttings are ready, transplant them and if desired, prune them. Sometimes, flowers will shoot up at an early stage, but this is not desirable, so cut off the flower shoots.

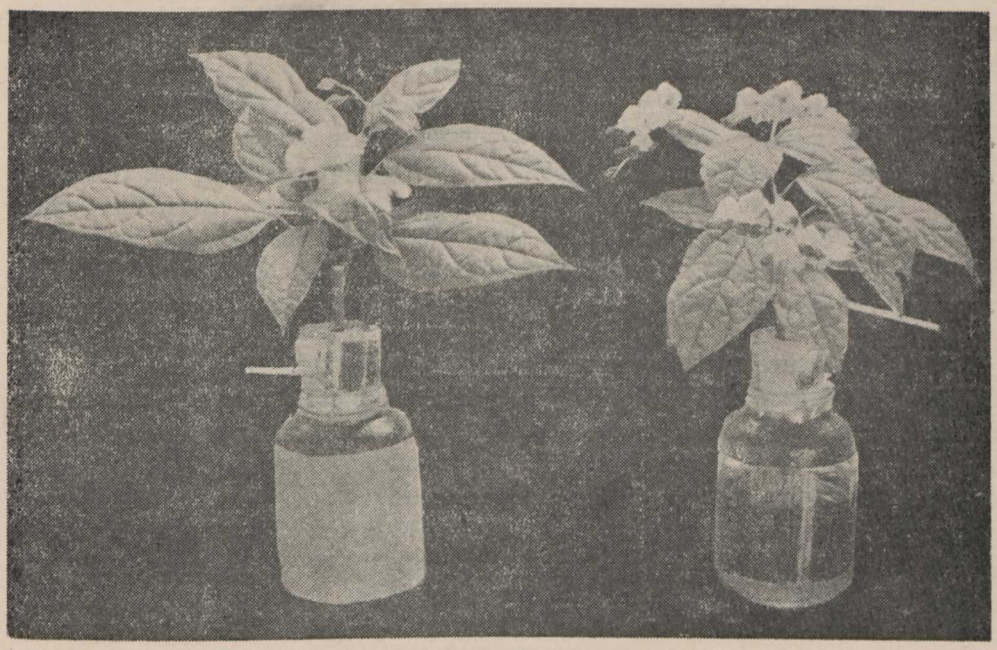


Fig. 4. Bleeding Heart planted in bottle culture. They are excellent for table decoration purposes as their size is conveniently small. Note the early flowering of the plant on the right side. It practically does not stop flowering throughout the year. A difficulty in this bottle culture is the method of aeration for the roots. An air tube is provided for bubbling. The bottle is painted black so as to give the dark condition needed for root growth. A piece of brown paper is used to further protect the root from sunlight reaching it (on the left).

Photo by L. H. KUO.

Fig. 5. 'Bleeding heart' planted in pot culture. Well drained rich soil should be maintained to prevent the formation of a layer of hardpan. Sufficient sunlight too must be available to enable it to flower season after season.

Photo by L. H. KUO.

THE FATE OF AGRICULTURE IN MALAYA.

By Nayan Ariffin.

No one can deny the fact that Malaya is primarily an agricultural country. A great majority of its people depend entirely upon agriculture as a source of livelihood. But, it is sad to say that the Malayan Government has for the past number of years, failed to appreciate the importance of agriculture—agriculture has been regarded, only as of secondary importance to this country and never has it ever been given any appreciable attention.

Agriculture has been treated most unjustly. The last Federal Estimate allocated only 0.8% of the Federal budget to agriculture. With this small sum of money the Agricultural Department is expected to carry out its numerous duties to improve the present agricultural conditions of this country and at the same time to maintain a College of Agriculture at Serdang. Thus the department always finds great difficulties in performing its duties satisfactorily, and as such very little improvement could be made in the development of Malayan Agriculture. Lack of funds is another factor which retarded the progress of the College of Agriculture, Malaya, at Serdang. With the small sum available, adequate facilities cannot be had. We need to train specialists but without a sizable fund it is simply impossible to cater for the needs of a modern Agricultural College, which Malaya should and must have.

However, now we have every confidence that the Alliance Government will do everything within its power to better the fate of agriculture in Malaya, which has so far been neglected.

In its manifesto, the Alliance Government has promised to give top priority to agriculture. We fervently hope that it is a sincere promise and not just a promise for the sake of winning many seats in the Federal Legislative Council.

The present standard of living of the padi planters in the kampongs, should be raised to a satisfactory level. The old system of agricultural practices should be discouraged. Farm schools or agricultural schools should be established in every district, so that modern and scientific knowledge of agriculture could be taught to the kampong folks. The government should make it a definite policy to provide more agricultural scholarships abroad, to suitably qualified students to further their studies in agriculture. The present College of Agriculture should be extended and facilities provided for higher training up to university level. For this, a Faculty of Agriculture should be established as this will enable students to do specialised studies. As it is, Malaya, a country which is fast moving towards independence, still has to import agricultural specialists from foreign countries.

However, we are glad to hear that a move has already been made in this matter by our present Minister for Agriculture, Che' Abdul Aziz bin Ishak and for which we congratulate him. His recent talks with the Chancellor of the University of Malaya, Sir Sydney Caine, about the establishment of a Faculty of Agriculture and of converting the present College of Agriculture at Serdang into a Faculty, is highly commendable. But, we are still doubtful, as the matter is still at correspondence stage and we fear that the matter will remain as it is for the next ten or twenty years, when all other faculties would have been established.

The fate of agriculture in Malaya can and must be altered for the better, at any cost.

Nothing is more simple than greatness, indeed, to be simple is to be great.

Emerson—Literary Ethics.

Education has for its object the formation of character.

— H. Spencer—Social Studies.

When tillage begins, other arts follow. The farmers, therefore, are the founders of human civilization.

— Daniel Webster.

THE BLEEDING HEART STORY

By Y. K. H.

Dear Friends,

To begin reading this article for amusement perhaps, or for the sake of just reading it, or for information, requires a certain amount of courage because you are in for a shock. Have you ever heard of a plant that can write ? No, a thousand times no ! But wait a minute, what, if it does ?

I am a little insignificant thing, yet an object of curiosity, admired, yet laughed at ; an object which tried and untried hands meddle with. I am a 'guinea pig'. I am a plant, a member of the so called Plant Kingdom.

A small world somewhat too overcrowded, this is where I live. I was born in a world that is very different from my ancestors'. The surrounding is rather unnatural, instead of the open sky with its light and darkness, wind and rain, there is above me a roof of glass, wooden lattice and attap. This, I understand is to shield me from undesirable characters. Oh! Mother earth and Father land! Yes, truly the earth is my mother. She is the depository of all life and the laboratory within which are carried out the changes that enable life to continue ; but, Oh ! my father-land is in happy and far, far away Africa.

At one time of my life history I was part of my parent. Later on I was separated from her and as a result was forced to lead a new existence of my own. My birth was brought about by a process called vegetative propagation. This is done by taking cuttings from the parent plant and planting them in sandy medium, until roots are formed after which they are transplanted into pots. From then onwards I had to fend for myself. When I am quite grown up, a book describes me something like this : " An attracive plant from West Africa ; flowering continuously, the red corolla contrasting with the swollen white calyx and does not appear to grow to a great size." By the way, my name is CLERODENDRON THOMSONAE, a rather difficult name to remember ! Do not be disheartened, I shall save you from being unduly fatigued. Just call me the Bleeding Heart. Sentimental, is it not ? This is an unlooked for relief, because the name is so easily remembered and it sounds so romantic. Of course I have nothing to do with such a name, it is man's doing. For instance, some of my friends are given such fanciful names as Wandering Sailor, Mile-a-minute, Cockscomb, Bachelor's Button and so on.

My home is the College Potting Shed. It is the only home I ever had and at this habitat I have lived for many, many moons. All this

time I never let trivial discomforts dampen my spirits. I was satisfied and contented, until one day something turned up, which spurred me into making comparisons. It seems that in recent years a great revolution in agriculture has been taking place. This has something to do with the introduction of modern and scientific methods, which are bringing about fundamental changes to farm life and in a sense, tend to lessen the drudgery of it. There is no doubt in the validity of this statement, but unhappily the place where I belong does not come into the embrace of it, for conditions here, do not seem to mark time with the advancement of the outside world. Timidly, I must admit that it is not up-to-date. Now, do not start flying off the handle at the slightest mention of this, perhaps I am a little ultra-modern, or I have lived too long in this 'ulu' that I tend to overlook the changes, and therefore wrong to say that it is backward. On the contrary, it is far from being not up-to-date. What it actually needs are some modifications such as :

(a) a cement floor, where potting materials can be stored and on which potting mixtures can be prepared,

(b) more tools and implements,

(c) reconstruction of the overhead wooden lattice. The laths should be arranged horizontally instead of longitudinally, thereby permitting sunlight to fall on all the surface area below as the hour passes. This is applicable when the shed faces an east-west direction, and

(d) expansion of the shed.

I believe in possessing a comfortable home, one of the essentials of life. I long to have the place presentable, because I am just as anxious and earnest to get into peoples' graces by showing off the handsome place.

I may live like a frog in a well, but life is always pleasant. I love sunlight, and fresh air, and water, too, but I simply cannot tolerate the unpredictable Malayan weather, sunny and bright one minute, gloomy and overcast the next. Since I am an object under experiment, I do not altogether lead a happy and tranquil life all the time. At a certain time of the year, especially during the beginning of the academic year, I am most unhappy. Whenever I see new faces with the famous 'Serdang Cut' or the 'Porcupine hair style' I know I am in for trouble ; my health deteriorates and my spirits are low. Unlike the old hands, they do not bother to lavish care and affection on me, instead, they handle me roughly, and lavishly dump fertilisers on me. This silly act simply upsets my system. At first I did not understand why the new faces love to remain in the potting shed longer than usual, not that there were jobs for them to do. I found it out soon enough. This is due to ragging. They can be seen loitering the hours away in this place. During their hour of idleness you can hear one or more of them cursing, "That bloody so-and-so is really too much, try to be funny with me again I'll....." Brave talk indeed ! Just wait and see how

they drag their feet after them when it is impossible for them to stay longer in the Potting Shed. They seem to crawl at snail's pace !

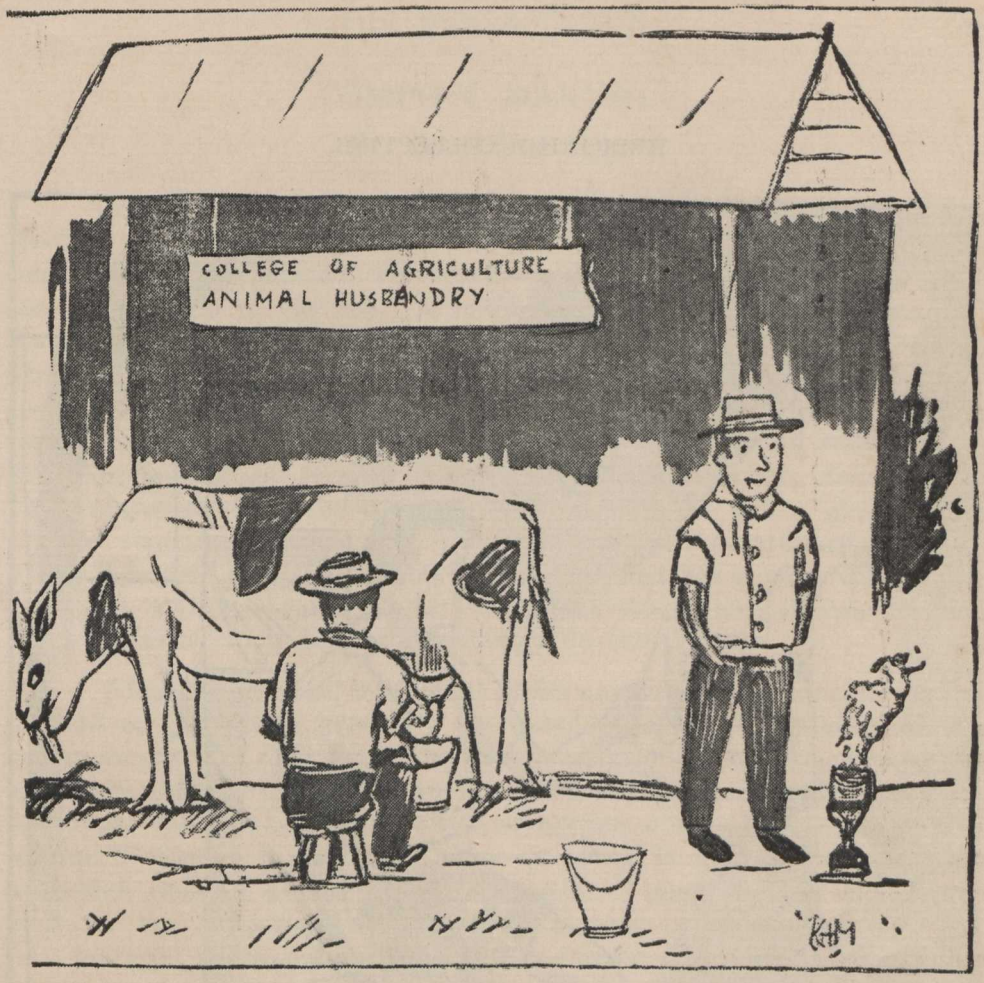
The visiting day is something I always look forward to. It is my red letter day. Knowing fully well my reputation and the centre of attraction I shall create, I hold myself with an air of importance. On this particular day I shall be the object marked 'special', because much praise and consideration will be showered on me. The gentleman who is conducting the group of visitors would proudly announce, "Ladies and gentlemen, you have now seen quite a number of things and heard a number of names, but I wonder how many of you can still recall what you have heard. However, before you go back, there is something I would like to introduce you to. I am sure you will treasure the memory of it. Meet the Bleeding Heart !" Well, what do you think ? The male visitors would exclaim : "Oh, boy ! Isn't that sentimental ?" The fairer sex would just utter "Oh !" with raised eyebrows, and when the meaning drives home you can see them turning their heads and wink at one another with a smile at the corner of their mouths.

No story of the Bleeding Heart would be completed without some mention of the occurrences of little things around this place. Being a small world one is destined to know what is happening around you, for the people you come across seem to speak rather freely here. In the course of my stay I discovered that men are very interesting creatures. To mention a few, some are 'Chronics' asking intelligent questions to which they already know the answers. There are also persons, who pride themselves in having graduated with a degree of 'Bluffology'. These are the persons who 'doom' right and left, and through thick and thin. It really amuses me to hear these 'doomers' talk ; they love to act and put on a big show. If I have false teeth, they will certainly be thrown out of the mouth during one of my outbursts of laughter. As far as I know, soldiers do not risk misfiring when they are short of ammunition. To shoot at random is harmful.

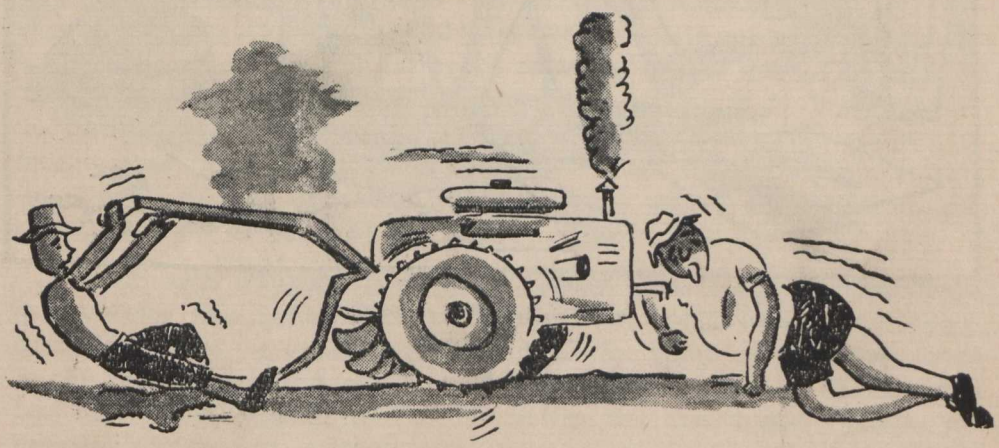
As regularly as the crowing of the cock in the early morning, I can hear shouting every night at 11 o'clock, the time when all lights in the dormitories are switched off. The students strike up the band in continuity, as soon as one group stops another begins, loud and clear. At first I was rather puzzled, but then it did not take me long to find out. The shoutings are nothing but meant to be "blessings". It seems that the students sign off each passing day with "blessings".

I believe in being blunt and straightforward, but why speak in riddles when mentioning words like "Doomers and Bluffology" (there are no such words in the dictionary !), "Chronics" and "Blessings" ? This is really an unsporting approach as regards my principle. The truth is that I am ignorant of the actual meanings of the words. Perhaps, I shall—soon, until then goodbye !

Bleeding Heart.



"O.K. Boy ! He is no more around ! You keep milking and I'll prepare hot milk for you."



Starting up the 'Old Boy' rotary hoe.

By Khairi b. Hj. Mohd.

HERBARIUM COLLECTING.

"Ah ! This is a fine specimen !"

By Khairi b. Hj. Mohd.

COMPOST MAKING.

By Yeow Toh Kia.

Organic matter is an essential constituent of all agricultural soils. Much of the organic matter in the soil is in the form of humus, a dark coloured colloidal material, which remains intimately associated with the mineral fraction of the soil. It is formed in the soil by the decay of materials of plant and animal origin through the agency of soil micro-organisms. Humus itself undergoes slow decomposition in the soil, and the plant nutrients present in it may become available to growing crops during the process. But, the more important function of humus as a factor promoting soil fertility is the improvement it brings about in the physical structure of the soil. It helps to give the soil a granular or crumby structure thereby facilitating drainage and aeration of the soil. The soil in this condition is easy to cultivate and has a good tilth. Soil may also contain organic matter in various stages of humification and these too exert their beneficial influence on soil fertility.

When a virgin soil is brought under cultivation the organic matter content of the soil is gradually decreased and this is followed by impoverishment of the soil. The disappearance of organic matter is especially rapid in the humid tropics where the hot and humid conditions accelerate the rate of decomposition of organic matter. As a result, the supply of humus is depleted unless an effort is made to maintain it. Although there is always a certain amount of plant residue left in the field for the formation of humus, the amount of humus formed from this material is always less than that destroyed. However, this loss can be made good by the application of farmyard manures and green manure, as has been the practice from very ancient times by farmers in all countries. In intensive system of market gardening such as that practised by the Chinese vegetable growers in this country, there is a tendency for the supply of farmyard manures to fall short. In view of the necessity of replenishing the soil organic matter, it is necessary for the farmers to find other sources of the material. Compost, obtained by decomposing the waste materials collected from the farm, is a proper substitute. We are concerned in this article with a discussion in the various aspects of compost making.

Although composting is comparatively new, it has been practised in countries like India, China and Japan for some time. And today, compost making is considered as one of the main cultural operations in the modern farming practice. In this country because of the rapid loss of the soil organic matter due to the hot and humid climate, the practice of compost making from organic waste materials is greatly encouraged by the Department of Agriculture. The advantages in the making and use of compost are many :—

(1) It is the cheapest method of fertilising the land. (2) The materials required for compost making can easily be obtained from the farm. (3) The waste material is often a nuisance to the garden. Compost-making helps to keep the garden and surroundings clean and in this respect it serves a sanitary purpose. (4) The process of composting demands little skill, labour and transport as well, because the raw materials used for the compost heap is often collected then and there. (5) There is little danger for a slight over application of well-rotted compost.

MATERIALS REQUIRED FOR COMPOSTING.

Any material other than those which are very resistant to decomposition such as mature twigs may be used for the preparation of compost. But care should be taken that diseased materials should not be included. Hedge prunings, fallen leaves, grass, vegetable wastes, banana stems and household refuse, make excellent compostable materials, after these are dried in the sun. These plant residues decompose at different rates. The succulent and tender materials will decompose fairly rapidly, while the more woody ones take more time to decompose. To facilitate the break-down of the latter, they are usually cut or crushed before being packed in the compost heap. These plant residues generally are rich in carbohydrates, but poor in nitrogenous compounds. The addition of substances more rich in nitrogen such as cattle manure, or nitrogenous chemical fertilizers in the form of sulphate of ammonia or calcium cyanamide, will help to decompose the materials more rapidly. This is because the fungi and bacteria responsible for the decomposition of organic matter require a supply of nitrogen to build up their own bodies, besides carbohydrates which form the main source of energy for the organisms. The addition of cattle dung also introduces micro-organisms to the compost heap. During the process of decomposition acid may be produced. In order to maintain an optimum working condition for the organisms, lime or wood ash may be added to neutralise the acidity.

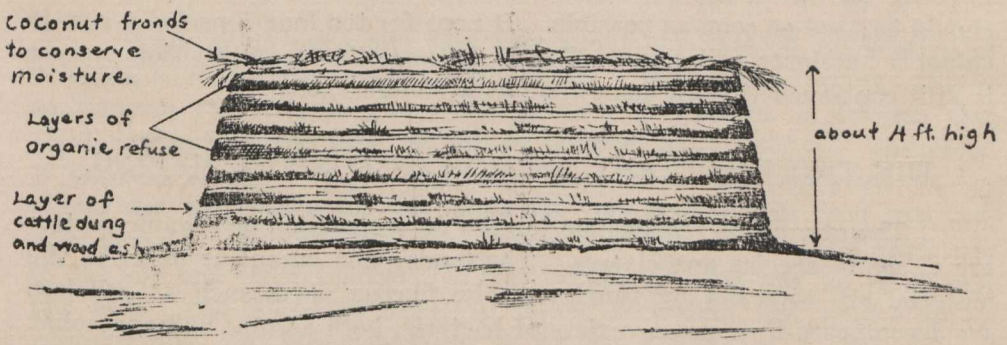
THE VARIOUS METHODS OF COMPOST MAKING.

There are three main methods of making garden compost. These are (1) the Indore Method ; (2) the Calcutta Method ; and (3) the the method practised at the Agricultural College, Serdang.

The first two methods are mainly practised in India. The last method is a modified form of the Indore Method to suit the requirements of farmers in this country and is recommended by the Department of Agriculture. We shall therefore deal with this method in some detail.

THE METHOD PRACTISED AT THE COLLEGE.

Before constructing the compost heap, the site for the heap should be carefully selected. It should be located near water supply as water is necessary to keep the heap in a moist condition. It should also be situated on a well-drained and cleaned ground in an open situation so that drainage and aeration will not be hindered. The standard size of the compost heap recommended is 9ft. x 6ft. at the base, 8 ft. x 5 ft. at the top and about 4 ft. high (see diagram). The dimensions may be altered slightly, if necessary.



Longitudial view of a compost heap.

In view of the aeration factor, the height of the compost heap is very important. If the heap is too high, the weight of the material will compact the lower layers and thus establish anaerobic (airless) conditions. A compost heap of this size requires approximately 500-600 lbs. of withered plant residues. In addition, 48 lbs. of fresh cattle dung and 2 lbs. of wood ash are needed. A suspension of 8 lbs. of cattle dung and 8 ozs. of wood ash is prepared in 8 gallons of water. This suspension is called slurry and is divided into 8 equal parts to be sprinkled over the material.

The heap is made up of 8 layers. At first, a layer of withered material of about 6 inches high is laid over the area of 9 ft. x 6 ft. This is followed by evenly spreading 5 lbs. of cattle dung and 3 ozs. of wood ash and one gallon of slurry is then sprinkled over the material, using a rose can. The process is continued until the eighth layer is reached. As it rises, slope the sides gradually inwards so that the top dimensions are 8 ft. x 5 ft. To minimize the loss of moisture and to promote fermentation by retaining heat, the heap thus completed, should be covered with coconut fronds or other material such as freshly cut branches of shrubs. Soon after constructing the heap, the fermentation begins. It proceeds rapidly and at the end of the second day the internal temperature may be as high as 135° F. The temperature slowly falls down until at the end of 15 days it is slightly above the normal. This means that the fermentation process has also slowed down. It is now

necessary to turn the heap and remake it. The main purpose of turning is to aerate the heap and by so doing, accelerate decomposition. Turning will also help to keep the heap in shape. As soon as the heap is remade, there is a distinct rise in temperature once again, due to the microbial activities. Another few turnings are required at regular intervals.The number of turnings needed will depend upon the nature of the material used ; the softer the material the quicker is the rate of decomposition, and consequently less turning is required. Normally, after a period of 10 weeks, a dark-brown, well-rotted compost will result, which is ready for use in the gardens or orchards. The compost thus prepared should be used as soon as possible. If kept for too long a period a loss in valuable nutrients will occur. This is because the decomposition process is still continued though somewhat at a slower rate.

THE TWO IMPORTANT ASPECTS IN COMPOST MAKING.

The organisms responsible for the docomposition of organic matter are of many species and classes. The tender and succulent parts of the material are attacked by fungi and the fibrous parts such as cellulose are decomposed by a great variety of bacteria, both aerobic and anaerobic. By aerobic we mean those bacteria that can only thrive where there is a supply of atmospheric oxygen. Whereas the anaerobic bacteria can perform their normal functions in the absence of atmospheric oxygen.

In the manufacture of compost emphasis should be laid upon moisture and aeration factors. The successful decomposition of organic matter by micro-organisms is dependent upon a sufficient supply of moisture. In a prolonged spell of drought the compost heap is likely to become too dry and it should therefore be watered. On the other hand too much water will also retard the rate of decomposition due to the lack of aeration.

Good aeration is particularly important in the early stages of decomposition, which is mainly carried out by fungi under aerobic conditions. It is brought about by turning the compost heap at definite intervals. As the manufacture proceeds, the heap slowly decreases in volume and becomes correspondingly more compact and good aeration is rather difficult to maintain, but this does not matter for at this stage the decomposition is chiefly performed by the anaerobic bacteria.

To sum up, therefore, sufficient moisture and good aeration are absolutely essential for the rapid decomposition of organic matter in a compost heap.

APPLICATION OF COMPOST.

As previously mentioned, well-rotted compost may be used as a substitute for farmyard manures, such as cattle dung in the cultivation of vegetables, food crops, etc., and also in pot culture. In the case of vegetables, and food crops, compost may be added to the soil shortly before planting or at the same time by thoroughly mixing it with the soil. In pot culture it is a valuable ingredient of the potting compost. Besides providing nutrient elements to the plants it also improves the texture of the potting compost so as to create a favourable medium for the development of roots.

There is no hard and fast rule about the rate of application of compost, so long as we use it discriminately. Well-rotted compost usually decomposes faster than the fresh farmyard manures, it follows that plant nutrients in the compost will be released more quickly. Therefore, if compost is added to the soil more than the actual requirements, the excess will be a waste, for the plants can only absorb their food nutrients very slowly. The amount to be applied will depend upon the conditions of the soil and other factors. It may be applied anything up to 20 tons per acre. The sound principle to follow regarding the application of compost and also other manures is to add a little at a time, but at frequent intervals. No doubt, this will involve extra labour but it is really worth the labour if we follow this principle.

From the foregoing brief account it is evident that much benefit can be derived from the practice of composting, and the problem of soil exhaustion can be solved to some extent by the intelligent use of compost. Both from the economical and sanitary points of view, composting is a sound and healthy practice. It is a pity that the majority of the gardeners and farmers in this part of the world, still do not realise the value of composting and as a result a large sum of money is lost annually, due to the poor yield of crops that could otherwise be saved, if waste materials of plant and animal origin were fully made use of in the farming practice. Therefore, if one is anxious to obtain the satisfaction, if not the greatest profit from the soil, one must not overlook the practice of compost making from the organic waste materials which are available in the farm.

DO YOU KNOW ?

Compiled by L. H. Kuo.

Certain blue-green algae are able to fix atmospheric nitrogen. Some of these algae grow in symbiosis with certain hydrophytes (plants which grow in water) ; others do not. This has great significance in rice growing countries, as it has been shown that growth of blue-green algae in rice fields increases the organic content and combined nitrogen in the fields. This being so, our padi-fields will benefit if we leave those algae in the water to thrive.

Termites live in the damp underground nests, on cellulose, which composes the main bulk of dead wood. Termites themselves are not able to digest cellulose, but contain in their alimentary tracts microscopic parasites that digest it for them ! Subterranean termites must keep damp, this leads them to build earthen tubes up the side of foundations to reach wooden beams to exercise their destructive power—slowly eating away the cellulose. Under houses with only two or three feet from the ground, they may build a stalagmite-like structure up from the ground to the wood. Cleverly enough, they stop eating just before the beam weakens enough to crash to betray them ! In America alone termites have caused damage up to $40,000,000 a year ! Take care of your building, then check the pest before it is too late.

You think to be a father is as simple as that ?
Well, have a look at the following :

A Giant Water Bug has to carry the unborn on his back where they have been placed by the female. Until they hatch the papa-bug cannot fly because the eggs seal his wings !

A Papa Seahorse not only has to carry the eggs, but has to feed the young with oxygen through his blood stream. Eggs are in his pouch on the abdomen for 40 to 50 days. What a father to be pregnant !

New Zealand Kiwi has to do the hatching for his lazy wife. He sits on the eggs for 80 days and loses half of his body-weight during the course. How would you like that ?

India has learned the secret of Japanese rice farming and has increased the yield to 8,000—14,000 pounds per acre. The method is simple and straight forward : selection of seed is made by dipping it in salt water. The heavy seed that sank to the bottom was retained, then washed in a bacteria-killing solution and dried in the shade, not in the sun—and ready for thin sowing ; one pound of seed provided seedlings for half an acre. Manuring was often, and planting was in 10 in. by 10 in. ; this spacing provides sufficient space. Straight planting is strictly observed for efficient weeding and manuring.

A NIGHT IN THE COLLEGE

By Mazlan.

Here are some interesting facts about the life in a College at night. If you were to put up a night in this College, you would know what it is. The atmosphere around the building is seldom silent before eleven. This is another "Lucky World" or to be exact, it is an "Unlucky World". Well, you have almost the same noise as they have in that amusement park, and to be closer still to it, you have a "cabaret" in this lonely part of Selangor. A cabaret alone is not enough, but we have something else—the "Dancing maniacs". They are the managers of the said cabaret. No band, but a radiogram is more than enough to make them jump. The experienced sway, following the tempo of the vibrating music, while the beginners make wrong steps and every now and then, step on the toes of the unfortunate partners. Rumba, Samba, Tango, Mambo or "Cugat Congo" and whether you have seen them use the wrong step or not, they would not care. In fact, they do not mind it as long as they have the pleasure of the evening.

The most unfortunate thing is that there are no girl students in the College. Poor fellows !

The music blasts out and the "maniacs" enjoy it—to the disgust of those in the library. In spite of the lively dance music in the "ballroom" some people can still go on studying. The long ahead finals seem to be on the morrow to them.

Time passes slowly in this place. The withdrawal of a maniac from the cabaret is replaced by the "incoming three". While music is being played, "tango-cum-badminton" is being rehearsed on the badminton court, if it should be a lighted one !

In the dormitory, yarns are very popular on the bunks. It is a roadside show. The orator, being equipped with "ammunition", occasionally shouts so as to impress his "customers" until a loud croaking "DOOM" rings out from one corner of the dormitory and so ends up his quacks.

The music still plays. It is ten o'clock when the tired maniacs withdraw from the cabaret and a new set of well dressed gentlemanlike, or shall I say prospective A. As., or A. A. Os., step in and take the floor. So the cabaret is never without a guest and on go our "gents" swinging their "ladies". Then suddenly the tune "God Save the Queen" is heard over the radio. The "gents" rush out to get their beds ready. The lights are off and silence begins to creep in, suddenly a yell from fifty mouths rocks the entire building. That's the night blessing. A soft whisper numbers one, two, three and this is followed with a shout

"F'ATTY" from the members of the dormitory. Well, this is not all. It is only a signal of the usual "Inter-dormitory War" which is to take place wihin a few minutes. "Ham Salleh", another yell responds. "Gora Singh", "King Kong" and many others are called, one after another. Very popular, eh ?

The boys are not to be blamed for the noise that they make, as this is a good time-signal for bed.

Well, this is all fun, but it is in fact an annoyance to the Welfare Secretary. Poor fellow, he is very important at this moment. He shuffles up and down and quacks "Hey ! Shut up men ! People want to sleep laa"—so he maintains his duty. "Classic" shouts a fellow in the dark as he leaves the dormitory and so ends the needed blessing for that night. Very influential, eh ! He is the law and order of the hostel.

Silence steals in. No more noise is to be expected. Every one is asleep except a few still mugging away late into the night, as if they are in for a Bar Exam !

The greatest fact in the story of man on earth is not his material achievements, the empires he has built and broken, but the growth of his soul from age to age in its search for truth and goodness.

—S. Radhakrishnan.

There, in the fragile structure of the leaf, is alchemy. Sunlight is absorbed to mix with the strength of the earth. In the leaf is mixed all the power, all the substance, all the mysteries, all the bountiful gifts of two planets. Shield the leaf from the sun and the leaf dies. Removed from it, the gift of the soil and the green leaf soon becomes a withered skeleton.

—R. C.

SOME JOKES FOR YOU !

Compiled by A. Basir.

THE OLD SCREW

Tan : " Auntie, I cannot see the screw in your hat."

Aunt : " Why should there be a screw there ? "

Tan : " When you passed us yesterday, daddy said, " Doesn't the old screw look fine in that hat ? "

RICE IMPORT

Professor. " Give me the tonnage of rice imported into Malaya for any one year from Siam."

Freshie : " In 1855, none."

UNION MAN

Mat : " Poor Ah Kow was drowned yesterday."

Samy : " Why couldn't he swim ? "

Mat : " He can swim all right, but he was a Union man and was not to work over-time. So, after swimming for eight hours he had to stop."

PIECE OF MIND

Sister : " You naughty boy ! I shall give you a piece of my mind."

Brother : " But let me call a certain scientist first."

Sister : " A scientist ? "

Brother : " Yes sis. A man who knows how to split atoms."

THE CRIME

Judge : "This crime was carried out in the most adroit and skilful manner."

Accused : (blushingly, interrupted) : " Now, now, your honour, no flattery please ! "

ANAEMIC

Doctor : " You are anaemic, you must take iron."

Patient : " Iron ? Why doctor, I can afford gold ! "

PRINT BUT NOT PUBLISH

Publisher : " Please let me print a kiss on your cheek dear."

She : " All right but remember you must not publish it ! "

Peter started school at the beginning of the term.
Uncle : " Well, Peter, what do you like best in school ? "
Peter : " Exchanging cigarette cards."

" Execuse my presumption, Madam, but I seem to have seen you before."
" Yes, I am the wife of the man who boxed your ears last night at the casino."

Nik fell down.
Mon : "A real boy does not cry."
Nik : "A real mother gives her boy sweets."

Lecturer : " What is sodium ? "
Lecturer : " And uranium, what is uranium ? "
Lecturer : " One more chance. What is the difference between sodium and uranium ? "

" Jane tried to drown herself three times because of a man."
" What kind of a man ? "
" A life-saver."

" What does that bandy-legged man do for a living ? "
" He is a model."
" No artist would employ him for a model."
" He is a model in a furniture factory for bow-legged furniture."

" Boy, Oh boy ! That was some blonde you had last night. Where did you get her ? "
" Dunno. I just opened my wallet and there she was."

FUNGI, A BLESSING TO MAN !

By "Appu"

Fungi ! To an ordinary layman this word fungi may not mean anything at all and if he does know, he may have the idea that it is a harmful organism to the various plants and to man himself. In fact very few, except the botanists know that certain fungi are of special industrial importance and of great help to man.

Fungi, through their special modes of feeding and habitats are able to make certain of our foods more palatable, preserve and even convert them into more nutritious foods. Nowadays, fungi are beginning to be recognised as a factor of some importance in our food industries. In the last few decades fungi have become a big lucrative business in the Western Hemisphere. A few of them have been exploited for our benefit in one way or another. Various useful products have been discovered and are still being discovered by astute and energetic research workers. But, as long as two thousand years ago, the Orientals knew how to make Soya Bean Sauce, cheeselike foods, Saki from soya beans and rice, with the aid of certain moulds.

It is said that since ancient times the Japanese have had the aid of the fungus "Aspergillus oryzae" or "Aspergillus flavour" for the production of their traditional wine, Saki, from rice. The rice is first washed, moistened, piled up and inoculated with the fungus. In a few days the fungus would have saccharified most of the starch in the rice into fermentable sugars. The rice is put into vats, yeast is added, and the resulting fermentation produces Saki.

A fungus diastase is also made by using "Aspergillus oryzae." It is grown on a moist, sterilized bran and on this substance the fungus produces large quantities of diastase. This diastase may be used successfully as a substitute for malt in the saccharification of grain potato or other types of starch-containing mashes. This diastase is a little more efficient than that of the ordinary barley malt in converting starchy grains into fermentable sugars. The fungus diastase is also a far more controllable and standardizable product.

Yeast or Saccharomyces, which is a common fungus, plays a great part in the commercial production of alcohol, beer, ginger beer, wine, bread and numerous other products. The common baker's yeast helps to give definite changes in structure and flavour in the dough during a given amount of time.

When barley grain is used in the commercial production of alcohol, the grain in the initial stage, is moistened and spread out on the floor. Sprouting is induced. A ferment diastase develops and a few days later

the grain is heated to stop germination. The malt thus obtained is steamed in water at a temperature of 50° — 60° Centigrade and the diastase acts on the starch grains converting it into maltase. Water is run off the grain and the maltase is decomposed by treating the solution with yeast. The glucose thus formed yields alcohol and carbon dioxide when the enzyme zymase in the yeast reacts.

Yeast cells also play their part in the manufacture of ginger beer which is characterised by its distinct acid nature, the ginger flavour, and the presence of a small amount of alcohol. Carbon dioxide is evolved in the process. The raw materials used are sugar and pieces of ginger roots. "Ginger beer plant" is added to a solution of the sugar. In the "Ginger beer plant" there is a yeast Saccharomyces pyriformis and a bacterium. A symbiotic relationship exists and both function best in the process, when in each other's presence.

Food yeast is propagated primarily for human consumption as a food constituent. Fodder yeast is produced for animal feeding.

Food yeast is a rich source of proteins and vitamins of B-complex. In the dry state it usually contains about 50% of protein and when used in the proper proportions with other foods, it makes a satisfactory and nutritious supplement to the diet of persons living under conditions where there may be a shortage of animal proteins or vitamins of the B-complex.

The Germans manufactured such foods and used a little during World War I. During World War II, several thousand tons were produced and consumed, their raw materials being sulphite liquor or wood hydrolyzates. The organism most commonly used for food or fodder yeast production is a strain of Torulopsis utilis.

Fodder yeast is produced by the conversion of waste surplus or low cost carbohydrate materials into animal feeding products. Fodder yeast can also be manufactured from the juice extracted from citrus waste. This juice is obtained by pressing ground citrus waste that has been limed. It contains an average of 6.63% of sugar, but is deficient in phosphate and nitrogen.

More recent development in the uses of yeast has made it possible for important foods to be manufactured. A purely vegetable extract which is almost indistinguishable from meat extract, may be prepared from yeast. Yeast for food had been produced by fermentation of sugar-containing solutions with added ammonium salts, obtained from atmospheric nitrogen as a source of nitrogen.

The cheese industry makes use of fungi in its process of manufacture. Various strains of fungi are used to give characteristic flavours and tastes.

The Roquefort type, a well known cheese all over the world for its characteristic flavour, obtained its flavour from a certain mould, since named Penicillium roqueforti. During several months' storage of the cheese, the mould grew in and partly digested the milk curd and fat. The fungus as it grew and ripened produced masses of bluish-green spores, running in irregular veins and pockets through the curd and these spore masses gave the cheese its characteristic mottled appearance, soft texture and tangy flavour.

In the equally famous Camembert Cheese, fungi are used in the flavouring. A variety of fungi were found and two common ones found in all the Camemberti Cheeses were a species of Penicillium—Penicillium camemberti and Oidium lactis. Spores of Penicillium camemberti were injected a day after the cheese was made. Oidium lactis is so universally present in cheese making establishments, that no inoculation is necessary. Thus the typical Camemberti flavour is obtained within a week.

Mushrooms, a class of fungi that are large enough to be seen by the naked eye, are also consumed as food. They have been grown in the Western Hemisphere for about four hundred years. Of the thousands of different kinds of wild mushrooms, only a few hundreds are big enough, have good flavour, keeping quality or are common enough to be used for food. Of these, few can be cultivated. The mushroom, called by Europeans, Agaricus bisporiger, is cultivated on a large scale for human consumption in Europe.

Morels or Spring mushrooms as they are otherwise known, are among the best of the edible fungi. They are crisp, savoury and inviting ; one of nature's superior delicacies.

Fungi, a group of living things, which at one time was thought to be harmful to man, has now been mastered by scientists. They have now been made into food and medicine for man. Its use for decorative purposes, is also steadily rising.

THE TITLE IS YOURS

By Ahmad Basir

As I lay in bed with the blanket tucked up to my neck, it was raining heavily outside. Ring-g-g-g ! sounded the alarm clock, but with the perfect co-ordination of my mind and hand the alarm was put off automatically. "Oh ! just a few minutes more in bed ; it is so comfortable !" I said to myself. But, as always the case, the minutes flew into hours. I knew that procrastination is the thief of time but still.....Clank ! Clank ! ! Clank ! ! ! That was a familiar Muthu's bell from the kitchen. Up, I bounced. The spring-bed screeched mercilessly as the pressure of 160 lb. carcass load was released from it.

The first mission was destination bathroom. This was followed by destination breakfast. A gulp of cloudy coffee and a bite of butter-smeared bread were the entire source of energy for the next two hours.

From the breakfast table we rushed to our 'arsenal' where we armed ourselves to the teeth with "parangs," "changkols" and "punkis." Our work for that Saturday was called " Operation Hevea Brasiliensis Planting." The overnight rain prevented us from making the operation a success. Our enemy, the Battalion H O stayed in our new rubber field. After a few hours of digging and trenching, we managed to drain the enemy—the water, into a swamp.

Having cleverly put the common enemy out of action, we began to investigate some sabotage which took place during the operation. We found out that there were traitors amongst us. This led to a muddy "mud-ball " civil war, in which many of us were pasted with mud from head to toe. A few suffered more seriously because they were struck by the guided "cowdung" missile ! The patriotic army under General Loco decided to call a truce. This was agreed upon and both armies of the patriots and the rebels retreated into the dining hall where the refueling of the almost empty stomachs took place.

After the refueling, both the armies advanced towards the field and there "Operation Hevea Brasiliensis Planting" was again continued. Half-way through the operation, the truce was broken and a very muddy battle ensued. Here, General Loco himself was a casuality, but under the care of Dame Tay and Private Link, he recovered to bring his patriotic 'Gonalocos' to a glorious but muddy victory. At exactly 11.45 a.m., the rebels under Marshall Horse Knee and Captain Cheroot surrendered unconditionally.

Peace was again regained. But domestic problems still prevailed.

As a result of the heavy over-night rain, the pipe connecting our water supply was cut off. So, all day long we carried about caked mud on our bodies. We waited patiently, hoping against hope that the water supply would be reconnected. Our hopes were futile. Time dragged uncomfortably and for the first time, at 4.00 p.m., Muthu failed to ring the bell—the signal for tea. Not that there was no water, "water, water everywhere but not a drop to drink" was the problem.

The irony was still to come. We were to have a dance that night and our dances were always grand affairs. Just imagine our exasperation ! The afternoon grew late and our anxiety grew in intensity. Our hopes were reduced to ashes. Better half than no bread, we thought. Hence, as a last resort we drew water from the well, "The Old Faithful". The water from "Old Faithful" usually served only for purposes of watering the vegetables, but then, time changed ! This water was of course, not drain water due to the fact that it was drawn from Old Faithful, but take it from me (and I am writing from experience) Old Faithful's water and water from the drain are in the same category ! Did it smell ? Oh, no ! just stinked ! ! One of us used only about half a gallon of water to wash himself. Well, if you do not know, that is, what we call economy and adaptations to environment !

Applications of perfume after the bath became a compulsion and we did nicely too ! From the way we looked and smelled, I was certain Mr. Max Factor Junior himself could not have done better ! !

At last, the long awaited moment arrived. The dance began. The hall was thronged with smartly dressed P. O. Ws. from the muddy battle field. Judging from the way those gay colourful young ladies reacted, we were passable. Did those girls know ? I think (and hope) not.

Well, boys, are we not proud ? We are still the stronger and wiser of the two sexes !

COLLEGE JOKES

You freshie have got three more years before your diploma ! So, get out ! !

I told you that butterfly is mine !

Sorry dad ! You have got to bring a partner before you come in !

Look ! freshie under training !

By Talib bin Majid.

OLD BOYS' CORNER

CO-OPERATION IN AGRICULTURE.

By Shariff bin Mohd. Rashid.

Co-operation, or working together, is not a new idea—it is as old as mankind. It exists in many forms, and these varied forms have depended largely upon the conditions under which people live and the nature of their problems. For the most part, people have co-operated in the way best adapted to meet the problems that are before them.

It is a well-known fact that the volume of farm products marketed or supplies purchased by each individual smallholder in Malaya is relatively small. A smallholder acting alone can do very little to improve conditions as they relate to his marketing and purchasing problems. Individually, smallholders are weak in bargaining power. However, through co-operative efforts, smallholders have been able to increase their bargaining power and bring about improvements and efficiency in selling their products and purchasing their farm supplies and services. Thus, agricultural co-operation can be defined as " Co-operation is the voluntary union of smallholders who usually acquire or hire land, labour and capital and organise themselves together for the purpose of securing savings in production, or marketing or the rendering of other services without assistance from government and upon equitable principles. The return or profit is usually fixed at a relatively low level and any surplus is disbursed in building up reserve funds, education and propaganda purposes and in bonuses to members according to the amount of business done."

Co-operation in agriculture has sometimes been made necessary by its prevailing unsettled conditions and also to try to lower the cost of the services of the middleman. Malayan agriculture is predominantly an industry which is normally run in smallholdings, and in the majority of cases there is no contact between producer and consumer. Thus, the producer is unable to adjust his market according to the wants of the consumers, and if he organizes the marketing of his farm products himself it will prove to be very uneconomical.

In the majority of cases he is not in a position to compete with the big concerns. It can be said that co-operation has sometimes originated as a protest against the hardships of competitive capitalism and developed as an attempt to withdraw from that system certain fields of activity in which to build up an alternative economy based on equality, welfare, self-help and mutual aid.

There are two kinds of co-operative societies, namely, the producers' and the consumers' co-operative societies. The producers' co-

operative society aims at controlling all the stages of distribution, thereby making larger profits. This has been successfully tried out by rubber smallholders in Baling, Kedah. They formed a co-operative society to process and market their rubber. It is a common belief in Malaya that oil-palms can only be grown on estates and not on smallholdings, because of the high capital required to purchase oil-palm processing machines. A trial on similar lines as that of the co-operative processing and marketing of rubber is worth considering if smallholders are to be encouraged to plant oil-palms. One of the ways of improving the smallholders' lot is by encouraging the formation of co-operative societies for the marketing of smallholdings' produce.

The consumers' co-operative society aims at buying goods directly from producers, thus eliminating some of the services of the middleman, and getting goods at lower costs. The real purpose of agricultural co-operation is not to eliminate the middleman, but to perform his services at a lower cost.

God Almighty first planted a garden ; and indeed it is the purest of human pleasures.

— Bacon—Of Gardens.

It's not enough merely to exist.
Seek always to do something more, something good somewhere.
Every man has to seek in his own way to make his own self more noble and to realize his own true worth.

— Dr. Alberts.

KNOW YOUR COMMON TROPICAL PALM

— THE COCONUT —

By Yap Yoon Keong.

Glancing through some old exercise books, I came across a six-sentence composition on coconut. It said that the coconut tree made a strong bridge over stream, and the nut gave a sweet drink. The milk was cooked as curry, and the leaves were made into brooms. Coconut oil was made from the 'nut', and ended with a generalization that coconut cakes were also made from it.

Simple—and they came from the factual observations made by the simple mind. What about the satay skewers ? In those days a stick of satay cost only two cents, but nowadays the cost is ten cents. How many of us have really taken notice of the coconut skewers

Another example is the toddy tapper. One is seldom told that toddy is beneficial for those suffering from beri beri, but when taken in large quantities it will be intoxicating. Perhaps, the simple man should not be told but in later years he will be curious seeing a tapper coming down from the top of the coconut palm with pots hung round the climber's waist. The pots contain toddy.

As one moved around the kampongs one saw people making shallow baskets from the leaves, in which to stand round-bottomed pots, weaving the leaves to make roofs and walls for a goat-shed, and growing flowers in halved nuts which can easily be seen hanging under the eaves of the houses. In exhibitions of art and handicraft in schools, one noticed ropes, door-mats, brooms and mattresses made of coconut coir, ladles and toys from the hard shells, and masks from husks. He observed that the food stalls outside the schools sold sweet potato and yam soup in coconut milk and that the sellers poured coconut milk into other sweetened preparations in the view of the customers. At home, he saw more examples of the uses of coconut.

In the kitchen not a meal was prepared without coconut. Brushes to scrub the floor or pots were chunks of the husk. Whereas children rolled the lamination into a small cone and blew through the small end as a horn, some elderly gardeners stuck a lump of tobacco into the bigger end, lighted it, and sucked away the smoke in this green pipe. When not engaged with their fishing, children carved rings for their fingers out of the hard shell and re-conditioned old mattresses with fresh fillings of coconut coir.

Though there was no decrease in the supply of toddy during those times, the tappers of coconut sap poured the contents of their pots into huge 'kwalis' placed over fires built of coconut leaves and fronds. The liquid turned brown and was ladled into rings made of leaves. On cooling, the messy stuff became cakes of gula malaka, to sweeten the coffee—an old industry of Malacca and other parts of Malaya.

Coconut coir rope, roughly made, served as a cigarette lighter on five-foot ways for itinerant cigarette sellers. One end of the rope was lighted, and it burnt, or smouldered through the length of the coil. The cigarette vendor then lighted another coil.

The charcoal from the coconut shell was said to be excellent filters for gas masks, but man in those days did not have the technique to make a gas mask.

Anyway, he did not see one during the nightmare period, and when that came to an end, he had not ended his observation of the uses of the coconut. He found that the market was gradually filled with margarine made of coconut oil, with a jam known as kaya, the chief ingredient of which is coconut milk with desiccated coconut, all in air-tight tins.

He also observed one practice, which in his opinion should be discouraged. On the trunk of the coconut palm are niches from the base to the crown. On these niches, the harvester climbs up the palm to pluck the ripe, or unripe nuts. In the niches would be seen stagnant water in which mosquitoes breed and through which disease may enter the tree.

Propriety of manners and consideration for others are the two main characteristics of a gentleman.

— Disraeli.

FARMING AND THE SERDANG GRADUATE

(By Lau Theng Siak)

Amongst the proposed new objects of our Alumni Association is one which seeks "to encourage graduates to take up farming on their own through the assistance of Government by loans and the grant of land."

It is a well known fact that farming in Malaya is entirely in the hands of smallholders and it will not be without profit to assess how graduates from Serdang with their scientific training would fare in competition with these seasoned groups of hard working but illiterate or poorly educated farmers.

It is a peculiar fact with farming that one need not have to have a store of scientific knowledge to do farming successfully. For instance, although water is the most important thing in farming, it is of no advantage to know that its chemical composition is H_2O. That it boils at 212°F., and freezes at 32°F. Far more important is the preparedness on the part of the farmer to apply water when it is best given, even if it means early in the morning when you still feel like sleeping or late in the evening when you like to sit out and enjoy the evening air.

Again, although a scientific training will enable an educated farmer to understand how discoveries in agricultural science are made, yet the application of these discoveries do not require a knowledge of the theoretical side at all. For example, a Serdang graduate would understand how inheritance is transmitted through the chromosomes or how vaccines are produced and how they give protection. Yet in the application of these important knowledge, the uneducated farmer is in no way unduly handicapped. All he needs is to buy the vaccine or the best tested breeding animal that he can afford and the rest is pure common sense.

The scientific training that we get is an asset but not necessarily a trump card. Our greatest advantage over the uneducated farmer is our greater resources. Undoubtedly we are richer, otherwise we would not have a college education. We have more capital ; we have better access to places where we can get things done. We can organise and fight for our rights whereas the poor illiterate farmer is pushed around and bullied by all and sundry and gets robbed off the fruits of his labour. But this advantage and the advantage of a scientific training would come to nothing without perseverance and diligence. These last two qualities are the basic ingredients in the recipe for the success in farming. They are the indispensables and farming demands perseverance and diligence to a degree that educated people find it hard to keep up to.

There is another aspect of farming which is seldom thought of but which in my opinion deserves serious consideration. It is the question of 'atmosphere'. As I have said before, farming in this country is entirely in the hands of illiterate or poorly educated farmers. So if a Serdang graduate wants to take up farming, he will find himself in the 'atmosphere' of a poor farming community. Just as cauliflowers will not grow successfully in the hot humid atmosphere of the tropics or rubber grows successfully in the cold humid atmosphere of England, so educated agriculturist will find it hard to thrive successfully in the insanitary, disorderly and disorganised 'atmosphere' of a poor farming community.

I have often heard it say that nowadays with fast transport it takes no more than an hour to get to town and enjoy all the niceties and amenities of civilisation. This advice is less practical than appears at first sight. An hour to go, an hour to come back and two or three hours to enjoy string up to several hours. As a farmer is a very busy man and his busiest hours are early in the morning and late in the evening, he will find it hard to fit in the several hours except at noon or in the night. Two hours drive in the maddening heat of the tropical sun or two hours drive in the dark of night after a day of hard work is not at all appealing and the likelihood is that the farmer will seldom go out.

But this loss of recreation and amusement is not all. Unless the graduate is fired with missionary zeal to befriend the illiterate farmers, he will after a time find them a poor substitute for friends of his own class whom he has left behind in the towns and the cities. The difference in their background, upbringing, education and so on form a gulf between them and the college trained farmer lost among his illiterate counterparts is bound to feel himself lonely and foreign to the communal life.

Apart from and more important from one's personal consideration is the question of children. Are you content that they should grow up in the restricted environment of the farm ? Are you content that they should receive their education in the local venacular school ? There is no gain—saying that in the cities they would have better facilities for a fuller all round development. It is the natural ambition of all parents to give their children the best opportunities in life—at least as good an opportunity as they themselves received. But tucking them away in a farm, miles away from civilising influence with none but local farm children as playmates and unqualified teachers as school masters cannot by any stretch of the imagination be calculated to be a forward step towards progress and advancement.

And what could be the alternatives ? Send the children to boarding schools or to board with relatives ? Recourse to these would mean breaking up home life and relinquishing parental influence. Is it desirable ?

In the realities of life all these things must be considered and all the things I have mentioned would some time or other confront the educated farmer and it is far better to confront them in advance than to be confronted later when he has both feet in the farm.

In our scheme to "encourage graduates to take up farming" we have to make provisions for these developments and it is my considered opinion that the graduate would have a far greater degree of success and live a happier life if they are not scattered individually but grouped together in settlements. In this way a congenial communal life can be built up. The farmer while enjoying the benefits of a pleasant outdoor occupation will not feel himself cut off from people of his kind. If in a small settlement, the graduates can at least have a small club house where they can meet in their leisure hours to indulge in friendly relationships. They can also organise transport to take their children to school in the city. If it is a big settlement, they can even have their own school, cinema and other amenities.

It is the building up of such settlements that I feel should be encouraged and not the encouragement of unorganised individual efforts. I am glad to hear from those who hold opposite views.

The farmer times himself to Nature, and acquires that livelong patience which belongs to her.

—Emerson—Farming.

BAHAGIAN MELAYU.

KATA PENYUNTING

Keluaran mujallah "Serdang Sun" kali ini ada-lah merupakan keluaran yang ka-empat kali-nya salepas perang dan dengan ini juga menunjokkan ka-empat kali-nya kita kembali bertemu di-lapangan "Bahagian Melayu" ini. Kita mengaku tentu-lah keluaran kali ini tiadak dapat melebehi keluaran yang sudah2, baik pun di-dalam bilangan-nya juga isi2-nya, tetapi kalau mengikut peraliran zaman perubahan munkin berlaku ; lambat atau segera-nya terpulang-lah di-atas kita sa-sama kita untok menjalankan peranan masing2.

"Serdang Sun" ini ada-lah satu2-nya mujallah yang di-selanggara-kan oleh penuntut2 sendiri dan tentu-lah kita berhak bermegah hati dengan kejayaan kita selama ini. Juga, kejayaan ini ada-lah dengan sokongan2 daripada rakan2 kita—penuntut2 tua. Oleh itu tidak-lah pula kita lupakan menguchap ribuan terima kaseh kita terhadap mereka. Kita perchaya perhubongan kita dengan mereka tidak akan putus selagi mujallah ini tidak lenyap bagitu sahaja, di-telan dek zaman.

Pertanian sekarang ini sunggoh pun mendapat perhatian yang saksama daripada Kerajaan tetapi agak sedeh juga sokongan2 yang rapi dari masharakat luas-nya, dengan erti kata yang sabenar, ada-lah sa-dikit benar. Ini tidak-lah dapat kita salahkan sesiapa pun kerana bilang-an Pegawai2 Tanaman buat masa ini ada-lah tersangat kechil, oleh itu pergaulan yang lebeh jauh dan penerangan2 berkenaan Pertanian tidak dapat di-jalankan dengan sempurna terhadap orang ramai, khas-nya orang2 Melayu. Namun bagitu kita harap dengan bukti2 yang telah di-tunjok dan yang munkin di-tunjok akan menarek perhatian orang2 ramai terhadap tinggi-nya dan mulia-nya Pertanian di-samping diri kita, terutama-nya bangsa kita orang2 Melayu.

Salam bahagia

dari

ABD. HALIM HASSAN.

MASHARAKAT DAN PERTANIAN

Oleh Nayan Ariffin.

Pada masa yang silam, pertanian di-samping masharakat orang-orang di-Malaya, khas-nya orang2 Melayu, ada-lah satu pekerjaan yang sangat tidak di-gemari ; munkin juga mereka rasa itu ada-lah satu pekerjaan yang mudah dan senang dan tidak perlu di-pelajari lagi.

Banyak daripada gulongan masharakat kita orang Melayu yang mahu melanjutkan pelajaran suka memileh bahagian saperti Perguruan, Kehakiman, Kedoktoran dan sa-dikit benar yang gemar pada Pertanian.

Tetapi kini perasaan yang sademikian rupa ada-lah jauh sakali. sabalek-nya mereka telah sedar, mereka telah insaf bahawa pertanian ada-lah satu pekerjaan yang paling mulia lagi suchi ia-itu satu ilmu yang perlu di-pelajari, kerana ia-nya ada-lah satu "profession" yang terdiri dari segi "Art serta Science."

Kegemaran ini dapat-lah di-perhatikan dari bilangan penuntut2 yang berkelusan "School Certificate" dengan beroleh Grade Satu atau Dua (Sijil-sijil yang pertama atau kedua) meminta' masok ka-Maktab Pertanian Malaya di-Serdang ini. Tetapi sayang-nya chuma sa-bilangan yang kechil sahaja dapat di-terima, oleh sebab bilangan "scholarship" (pendermaan pelajaran) yang di-keluarkan oleh kerajaan Persekutuan untok Ilmu Pertanian ada-lah terhad.

Pula, kegemaran ini bukan-lah di-samping penuntut laki2 sahaja bahkan juga bagi penuntut2 perempuan. Bukti-nya ia-lah pada tahun ini banyak permintaan telah di-terima dari penuntut2 perempuan meminta' supaya mereka di-benarkan masok belajar di-Maktab yang tersebut. Tetapi dukachita, permintaan mereka itu terpaksa di-tolak oleh kerana dewasa ini, di-Maktab Pertanian sana, tidak ada rumah tumpangan untok kediaman mereka, chuma yang ada sekarang semua-nya ia-lah untok penuntut laki2 sahaja. Bagai-manapun kita harap Kerajaan tetap tidak akan menghampakan permintaan mereka ini pada masa yang akan datang, kerana mereka ada-lah berhak mempelajari apa sahaja yang boleh di-pelajari oleh saudara laki2-nya.

Kerajaan Perikatan dalam "manifesto"-nya telah berjanji kapada ra'ayat hendak memberi perhatian yang utama tentang Pertanian. Kita harap mereka akan kotakan segala kata2 mereka itu dan tidak akan memungkirkan janji-nya, kerana Pertanian ada-lah penting buat Malaya sa-buah negeri yang sedang bergerak maju menuju ka-arah kemerdekaan.

Tiada dapat kita nafikan lagi kerana telah nyata dengan terang pada kita bahawa sa-gulongan besar dari ra'ayat jelata negeri kita ini, bergantong kapada pertanian untok melaksanakan kehidupan mereka hari-

hari. Maka dengan itu Kerajaan mesti-lah mengutamakan pertanian. Besarkan lagi Maktab Pertanian yang ada sekarang ini, lebehkan bilang "scholarship" untok Ilmu Pertanian pada tiap2 tahun dan dirikan sa-buah "faculty" untok Ilmu Pertanian supaya dapat-lah penuntut2 mempelajari pelajaran yang lebeh tinggi berkenaan pertanian. Sunggoh pun telah lama kita dengar bahawa Kerajaan berchadang hendak mendirikan "faculty" tersebut, tetapi hingga kini tidak ada hasil-nya. Juga telah terchateh dalam Ranchangan Lima Tahun University, sa-buah "faculty" untok Ilmu Pertanian akan di-dirikan, tetapi dukachita hingga hari ini tidak ada bokti-nya dan ranchangan itu chuma tinggal dalam ranchangan sahaja.

Nah ! sekarang ini, kesemua-nya itu ada-lah terpulang kapada Kerajaan Perikatan, Kerajaan yang kini mewakili ra'ayat jelata. Jika benar mereka itu jujor dan hendak mengutamakan pertanian, nah ! tunaikan-lah kata2 mereka itu ; kerana ini-lah masa-nya dan tempat-nya yang sa-benar oleh sebab Malaya dewasa ini sedang bergerak maju menuju ka-arah kemerdekaan dan sangat-lah perlu-nya di-adakan sa-buah "faculty". Maka "faculty" untok Ilmu Pertanian ini akan menjadi sa-buah "nucleus" (pusat) dari mana akan terkembang-nya Ilmu Pertanian itu ka-seluroh Malaya.

Azimat Diri

1. Wajib kita tahu menulis kerana dengan menulis itu dapat kita menyampaikan apa yang kita ketahui kapada orang yang tidak mengetahui.

2. Jangan merasa hina diri dan jangan berdukachita. Kamu tetap paling tinggi selama Iman ada dalam hati-mu.

3. Tiadak-lah memakan sa-sa-orang akan makanan yang terlebeh baik daripada bekas hasil usaha tangan-nya.

Di-suson oleh :—

H2

PETANI-PETANI DENGAN BAJA DAGANGAN

Oleh NOD Kedah.

Hari ini Persekutuan Tanah Melayu ada mengandongi lebeh kurang enam juta ra'ayat jelata. Boleh di-katakan bahawa 99% daripada-nya bergantong kapada beras sa-bagai makanan-nya sa-hari-hari. Tetapi sunggoh pun Malaya ini sa-buah negeri yang boleh mengeluarkan hasil2 dari tanam-tanaman-nya, sayang-nya ia tidak dapat mengeluarkan padi2 untok memenohi kehandak2 ra'ayat. Sabalek-nya pula ia bergantong kapada jiran2-nya terutama sekali Siam dan Berma. Oleh itu tidak-lah dapat kita nafikan yang Malaya maseh membeli lebeh daripada 50% beras yang di-kehendaki-nya daripada luar negeri. Hal ini sangat-lah penting di-perkurangkan jika ikhtisad negeri ini hendak di-perbaiki.

Jika di-tilik dengan teliti-nya tentu-lah di-ketahawi sebab2-nya yang demikian. Boleh jadi Malaya ini tidak mempunyai tanah yang chukop sesoi untok menanam padi. Tetapi kita tahu bahawa di-sebelah barat saperti negeri2 Kedah dan Perlis ada mengeluarkan banyak padi. Tetapi banyak lagi daripada petani2-nya yang maseh lagi menggunakan chara2 lama di-atas hal2 menanam. Oleh itu boleh-lah di-katakan bahawa hasil tanaman mereka ada-lah kurang memuaskan jika di-bandingkan dengan tanah2-nya dan pekerjaan2 yang di-jalankan. Mereka tidak tahu menggunakan baja dagangan saperti Ammoniam Sulphate, Super Phosphate dan lain2. Tetapi negeri2 di-sebelah timor saperti negeri Kelantan, baja dagangan telah di-chuba dengan jaya-nya. Menurut uchapan daripada yang terhormat Mentri Tanam-tanaman melalui Radio Malaya dalam bulan September yang lepas bahawa dalam lawatan-nya ka-timor, beliau telah berpuas hati dengan petani2 di-sana di-atas chara2 mereka itu menggunakan baja dagangan ; kata-nya lagi, menurut berita daripada sa-orang Imam bahawa hasil pendapatan zakat yang di-terima oleh Imam itu ada-lah lima kali ganda daripada tahun yang lepas. Maka ini bermaana-lah, bahawa perolehan padi pada tahun itu lima kali banyak-nya daripada tahun yang lalu,——tahun yang tidak menggunakan baja dagangan. Petani2 di-Kedah dan Perlis maseh lagi ragu-ragu dengan baja2 ini, di-sabalek-nya ada mereka menggunakan baja tahi kelawar, tetapi baja ini banyak-lah kekurangan faedah2-nya apabila di-bandingkan dengan baja2 dagangan. Kerap kali-nya baja tahi kelawar ini berchampor dengan tanah merah. Kadang2-nya pula penjual2 tahi kelawar ini dengan sahaja di-champor tanah untok meninggikan keuntongan mereka. Pendek kata baja2 ini tidak mengandongi sa-ratus peratus baja yang di-dapati dari bukit2 atau gunong2. Kadang2-nya pula baja ini tiadak dapat di-beli oleh semua petani2 itu.

Chara2 yang di-guna-nya ada-lah sangat tidak memuaskan hati. Kerap kali-nya apabila petak-petak sawah-nya ada berayer lepas hujan dua tiga hari, maka ia pun mulai menabor baja2 itu ka-dalam sawah-nya. Kita mengetahui bahawa baja tahi keklawar ini ia-lah jenis "organic"

(baja2 yang berasal daripada hidop-hidopan), jika bagitu tidak-lah dapat mengeluarkan dzat2 faedah-nya sa-hingga lepas beberapa bulan. Apabila sampai musim menanam ia-itu selalu-nya dua atau tiga bulan lepas ia menabor baja-nya, hujan pun bertambah lebat. Maka pada ketika itu, petak2 sawah-nya tentu-lah penoh dengan ayer. Maka mustahak bagi-nya membuka tali ayer. Apabila berlaku demikian, tidak-lah ada keuntongan apa2 yang di-perolehi dari baja2-nya itu. Satengah2-nya pula menchelopkan anak2 semai-nya kapada baja tahi kelawar yang telah di-sediakan di-dalam satu bekas yang berchampor dengan ayer. Ini di-panggilkan baja chelop. Kita tahu bahawa dzat2 makanan yang dapat di-ambil oleh anak2 padi pada ketika itu ada-lah sadikit, dan tentu-lah tidak menchukoppi untok menyara-nya sa-umor hidup. Kita perchaya bahawa chara2 memberi baja ini bukan-lah tidak baik tetapi tentu-lah tidak memuaskan hati untok mendapat perolehan yang lebeh banyak lagi Ada-lah kesalahan2 yang mereka itu tidak menggunakan baja2 dagangan itu ia-lah mereka tidak di-tunjokkan dengan saperti-nya. Kesalahan2 ini tidak pula boleh kita salahkan pegawai2 tanam-tanaman kerana kekurangan kaki tangan. Kerajaan Perikatan dalam "menisfeto-nya" hendak mengutamakan tanam-tanaman, oleh itu mustahak-lah bagi-nya menghantar pegawai2 tanaman untok menolong kaum tani ini.

Telah banyak di-temui petani2 ini juga biasa memakai baja-baja dagangan saperti "Ammoniam Sulphate," tetapi mereka tidak tahu faedah2-nya terhadap pokok2 padi mereka, mereka chuma berharap kapada banyak perolehan-nya sahaja. Mereka tidak tahu bahawa baja ini chuma membesarkan pokok2 padi itu sahaja bukan memberi banyak buah-nya. Juga mereka tidak tahu sukatan-sukatan yang patut di-pakai. Ini mendatangkan kerosakan kapada pokok2-nya dan terus mereka menudohkan baja2 dagangan ini tidak baik dan tidak sesuai dengan tanah2 sawah mereka. Bagitu-lah juga dengan baja "Super Phosphate." Baja ini kadang2-nya di-buboh di-dalam bekas2 semai-nya sabelom menabor. Dengan hal ini pokok2 padi ini jadi terenchat, tidak mahu besar lagi. Oleh sebab baja ini yang sabenar-nya memberi berbuah lebeh banyak dan chepat masak.

Mengikot Utusan Melayu keluaran 5th ; Oct. 55, sabanyak dua ribu acre tanah yang baharu di-buka untok menanam padi di-Terangganu, tetapi pendudok di-situ tidak tahu chara2 menanam padi dengan sebab itu terpaksa-lah meminjam orang2 dari Kelantan untok menunjokkan jalan2 menanam padi. Dengan ini tidak-lah hairan kita mendengar kalau petani2 itu tidak tahu menggunakan baja dagangan oleh sebab baharu sahaja di-ketahawi-nya.

Jika petani2 ini tahu menggunakan baja2 dagangan ini sangat-lah besar faedah-nya oleh sebab baja2 ini murah jika di-bandingkan dengan baja tahi kelawar. Baja2 dagangan dapat di-pakai dengan sukatan-nya jadi tidak-lah mendatangkan kerugian. Juga baja2 ini dapat mengeluarkan dzat2 makanan-nya dalam masa yang singkat. Dari itu banyak lagi pertolongan yang akan di-beri kapada mereka supaya banyak lagi baja-baja dagangan ini di-gunakan. Apabila pokok2 itu di-beri makanan kalau tidak banyak perolehan-nya, sadikit pun jadi-lah.

PERWIRA PERTANIAN MALAYA.

Oleh Belia Melayu.

Gong ! Gong ! Gong !
Bergema di-angkasa raya,
Rioh, bangkit Perwira Pertanian Malaya,
Terus.....menyuchi muka.

Siap sedia,
Untok mara.

Hibat sunggoh Perwira Pertanian,
Lengkap bersiap.....,
Dengan tajak, changkul dan parang.

Setapak demi setapak Perwira maju,
Gentar ? ..... Tidak !
Hingga Sang Suria membakar, layu,
Berpantang mundur.....tetapi ?
Maju !

Itu-lah kewajipan kami sekalian,
Ada ka-sawah ada ka-ladang,
Masing2 dengan pekerjaan,
Untok mempelajari Ilmu Pertanian.

PENANGGONGAN-KU

Oleh H2.

Embon maseh tebal,
Angin sejok membekam tulang,
Ku ketar menggigil,
Tetapi..... bangkit !

Changkul, tajak lantas di-sambar,
Kaki melangkah terus berjalan ;
Hutan rimba di-tebas lapang,
Gema suara memechah kesunyian.

Sang Suria memanchar terang,
Menchuchuri rahmat ka-'Alam Maya ;
Tapi sanubari gelap dzalmat,
Bak mega di-awan tinggi.

Bergotong royong, bertongkos lomos,
Ta' ada sympathy.....
Burong terbang bebas di-angkasa,
Untok-ku ta' ada merdeka.

Nah ! ini dia Pertanian,
Nan tinggi pendirian-nya,
Bersama ! Berjuang ! Berpadu.....
Kerana kehendak Hidup.

"PELAJAR DAN KESENIAN"

Oleh Tun Asma Kedah.

Malaya ada-lah satu negeri yang termuda, muda di-dalam segala-gala-nya; meski pun demikian penghuni-nya tetap bergerak dengan deras bebas meninggalkan atoran lama tempat mana di-ganti dengan yang baru; sedangkan yang lama itu hilang resap bagitu sahaja. Saban negeri di-Timor ini terutama-nya, yang ta'mahu di-chap kono mesti mengikut aliran zaman, konon-nya tamaddon mengikut perjalanan waktu. Di-sebabkan oleh perasaan yang sedemikian-lah maka kita orang2 Melayu telah meninggal dan melenyapkan kebudayaan dan kesenian yang telah lama di-pusakai oleh nenek moyang kita di-zaman nan lampau. Kini kesenian, kebudayaan Barat mendapat perhatian dan tempat yang istimewa di-dalam kehidopan kita sa-hari2. Sekarang, ini dia mithal2 yang boleh mengukohkan kata2 yang terchatek di-atas itu.

Beberapa puloh tahun dahulu di-waktu mana chuma Bangsawan sahaja yang boleh di-katakan wayang, datok nenek kita ta' tahu apa itu "film". Bangsawan, achap kali di-panggil Sandiwara di-akhir zaman ini, ia-lah satu daripada kesenian Melayu yang maseh lagi hidup, sedehnya sadikit benar di-antara kita yang betul-betul mahu menjaga kehidupan-nya. Untok membuat kemajuan di-dalam lapangan ini, para pelajar pasti-lah mengambil peranan yang utama, kerana kapada pelajar-lah letak-nya tugas2 mempertahankan kebudayaan, kesenian kita daripada mati tiadak berkubur. Dari masa kita maseh muda belia-lah kita patut membentokkan penghidupan kita hari2 mengikut chara2 biasa-nya di-peraktik oleh pendudok2 dunia Timor ini. Asohan anak2 muda jangan sakali-kali di-ikut sachara Barat ; iblis Barat pesti di-jauhkan. Berkenaan dengan Sandiwara tadi, di-samping menghidupkan kebudayaan, anak2 muda berpeluang menunjokkan peribadi mereka yang tersendiri ka-pada orang ramai.

Sering kali di-dengar bangsa2 asing berkata bahawa orang2 Melayu chuma tahu meniru, tetapi ta' tahu membuat tauladan. Sunggoh bohong-nya perkara ini bergantong kapada perpatah "Ta' tumboh ta' melata." Kata-kata yang sademikian ini mesti di-padamkan dari kalbu-nya. Tiru meniru itu molek kadang kala-nya, tetapi kerap kali-nya ia boleh membawa kapada akibah yang burok. Lama kelamaan chuma sifat, bentok muka sahaja Melayu, sedangkan jiwa dan semangat Melayu itu habis berkarat dek lama ta' menguna-nya.

Satu benda yang bersegi sukar di-buboh di-dalam benda yang bulat ; orang Melayu patut tinggal dalam tamadon kemelayuan.

MENGAPAKAH POKOK-POKOK MATI KELAPARAN

Oleh NOD Kedah.

Sudah menjadi kelaziman kapada sesiapa pun tidak menghiraukan pokok2-nya yang di-tanam jikalau hidup-nya subor. Tetapi apabila pokok2 itu kurang subor, maka baharu-lah ia mulai menanya diri-nya sebab2 demikian. Pokok2 itu tidak mendzahirkan tanda2 segan hidup atau tidak subor ; melainkan salah satu daripada kehendak2-nya itu kekurangan. Petani2 biasa memberi pokok2-nya tahi lembu, tahi kerbau atau sampah2 yang di-bakar. Tetapi, mereka tidak sedar bahawa mereka telah memberi pokok2 itu makanan saperti Nitrogen, Phosphorus dan Potassium. Jika pokok2 ini sanggop memberi dengan baja2 yang saperti ini tidak-lah mereka khuatir lagi.

Di-sini di-terangkan dengan rengkas-nya hal2 yang bersangkutan dengan kehidupan pokok2. Kehidupan pokok2 itu bergantong kapada beberapa perkara yang mustahak di-ambil tahu serba sadikit. Adalah yang terutama sekali ia-lah makanan. Baik pun manusia, binatang dan sa-bagai-nya berkehendakkan makanan yang chukop jika kehidupannya hendak sempurna. Begitu-lah juga dengan pokok2 di-muka bumi ini. Makanan-makanan-nya ia-lah Nitrogen, Phosphorus, Potassium, Magnesium, Calcium, Iron, Manganese, Boron, dan Copper. Makanan-makanan ini boleh di-dapati daripada tanah, tetapi, kerapkali-nya makanan saperti Nitrogen, Phosphorus dan Potassium itu tidak menchukopi jika tidak di-beri dari masa ka-semasa, oleh sebab mereka ini ada-lah di-kehendaki dengan banyak-nya. Dengan itu hendak-lah di-beri baja saperti tahi lembu, tahi kerbau dan daun2 kering kerana baja2 ini mengandongi dzat2 itu sedikit sebanyak. Juga baja2 dagangan saperti Ammonium Sulphate, Super Phosphate dan Muriate of Potash ada mengandongi dzat2 itu, tetapi baja2 dagangan ini hendak-lah di-guna dengan berhad oleh sukatan yang tertentu.

Pokok2 ini tidak dapat menggunakan makanan2 yang di-beri jika tidak chukop dengan sharat2-nya. Salah satu daripada-nya ia-lah ayer. Dengan rengkas-nya pekerjaan ayer ini ia-lah menolong membawa makanan kapada pokok-pokok, menolong meresapkan carbon—"Photo-synthesis" dan juga menahankan pokok-pokok itu jangan layu pada waktu panas. Dari itu beri-lah pokok2 kamu ayer yang berpatutan dengan apa2 chara sekali pun, supaya anggota2nya dapat bekerja. Sharat yang kedua ia-lah chahaya matahari. Chahaya matahari ini di-kehendakki dengan berhad juga. Sa-tengah pokok2 berkehendakki 100% chahaya matahari, sa-tengah-nya 50% dan sabagai-nya. Olek itu hendak-lah penanam chuba menjalankan pekerjaan-nya sa-hingga ia mahir dan

tahu anggaran kehendak2 pokok-nya itu. Jika pokok itu berkehendakkan kurang chahaya matahari maka beri-lah ia bertedoh saperti menanam di-naongan pokok-pokok "Shade tree," atau membuat para di-atas-nya dan di-muatkan daun2 kayu saperti daun kelapa.

Sa-tengah daripada sharat2 yang di-kehendakki oleh pokok2 itu ia-lah memberi perjalanan yang senang dan sempurna kapada akar2-nya, oleh kerana akar2 ini pun bernafas saperti manusia juga. Maka ini hendak-lah tanah2 yang di-guna itu di-changkul dan di-gembor sa-belum di-tanam, boleh juga di-gembor tetkala pokok2 itu telah besar. Dengan itu dapat-lah akar2 itu berjalan dengan senang menchari makanan-nya. Satu jalan yang penting untok menolongkan perjalanan akar2 itu dan mudah di-kerjakan ia-lah menambah lebeh banyak lagi sampah2 dan daun2 kering ka-tanah itu. Lama-kelamaan daun2 kering itu boleh-lah menjadi makanan pokok2 itu serta menolong membiakkan "Micro-organisms" yang menjauhkan akar2 itu dari "Penyakit akar." Daun2 ini apa-bila repot menolong tanah supaya dapat menyimpan atau mengadakan ayer yang lebeh banyak untok kegunaan pokok2.

Musoh2 pokok pun boleh menyebabkan pokok2 itu tidak hidup dengan sempurna oleh sebab sa-tengah daripada musoh2 ini memakan akar2 pokok itu. Dengan ini ta' dapat-lah pokok2 itu memakan makanan-nya terutama sekali Potash. Sa-tengah daripada-nya pula memakan daun2 dan ini menahankan pekerjaan resapan carbon "Photosynthesis." Dengan sebab itu musoh2 pokok pun mustahak di-jaga dengan beberapa chara. Tetapi rachun "Insecticides" saperti akar tuba, DDT dan Agrocides ada-lah lebeh mudah di-gunakan.

Bila-kah masa-nya pokok2 itu menunjokkan tanda-tanda kelaparan ?

Maka ada-lah salah satu daripada ia-lah daun2-nya bertukar menjadi bermacham-macham warna dan kadang2-nya menjadi layu. Tetapi satu daripada yang mudah di-ketahui bahawa pokok2 itu kekurangan makanan ia-lah daripada warna daun-nya yang kerapkali daun2 itu bertukar warna jadi hijau kekuning-kuningan pada tempat2 yang tertentu saperti di-tepi2 daun atau di-chelah urat2-nya. Apabila kekurangan makanan ini berlaku dan jikalau tidak di-baikki tentu-lah pokok2 itu tidak dapat mengeluarkan hasil yang sa-patut-nya dan mendatangkan kerugian kapada tuan-nya ; harus pokok2 ini mati kelaparan sa-belum hasil-nya dapat di-pungut.

Apabila berlaku demikian, baharu-lah peladang2 bertanya diri-nya apa-kah patut di-buat supaya pokok2-nya subor samula. Maka dengan mengetahui sadikit sa-banyak sharat2 dan kehendak2 pokok itu dapat-lah ia menchuba dengan perlahan-lahan memperbaikki kesalahan-kesalahan-nya. Dengan ini tidak payah-lah ia ragu2 lagi menyelamatkan pokok2-nya daripada mati kelaparan.

PEMBUNOH.

Oleh Belia Melayu.

Bila Sang Suria dah terbenam,
Unggas di-angkasa berterbangan ka-sarang,
Rioh, riang.....tetapi ?
Akan kelam sepi.

Suasana beransor tenteram,
Binatang-binatang kechil mula menyerang.....?
Ka-angkasa,
Tak takutkan bahaya,
Ka-sana sini,
Menchari rezeki.

Tetapi ! ! ! ..... ?
Malang tak berbau
Riang berganti muram.

Sedeh ! ! !
Binatang-binatang kechil yang tak berdosa,
Melarat, menderita, ... oleh,
Si-Pembunoh yang tak bertimbang rasa.

Pembunoh memang kejam,
Bersedia menerkam,
Senjata di-tangan.

Oh ! ! !
Berkejar Pembunoh ka-sana sini,
Binatang-binatang kechil melarikan diri,
Tetapi ..... ?

Ada-lah menjadi peratoran 'Alam
Yang lemah di-tindas, di-telan,

Awas ! ! ! !
Pembunoh ..... ?
Yang menuntut pelajaran,
Di-Maktab Pertanian.

BERCHUCHOK TANAM DENGAN TIDAK BERTANAH

" Hydroponics "

Oleh NOD Kedah.

" Hydroponics " di-dalam bahasa Melayu ia-lah chara-chara berchuchok tanam dengan tidak menggunai tanah, tetapi di-ganti dengan pasir, ayer, habok papan, atau rumput2 kering.

Ada-lah kehidupan pokok2 itu tergantong satu daripada-nya, kapada dzat2 makanan yang di-dapati-nya dari apa jua, umpama-nya, tanah, pasir dan sa-bagai-nya. Dzat-dzat makanan yang di-kehendaki-nya itu tiga belas perkara—Nitrogen, Phosphorus, Potassium, Magnesium, Sulphur, Calcium, Iron, Carbon, Oxygen, Manganese, Boron, Zinc dan Copper. Oxygen dan carbon di-dapati-nya dari udara, dan yang baki lagi sa-belas itu terbahagi kapada dua bahagian besar—(i) bahagian yang di-kehendaki dengan banyak, di-panggil " Major Elements " (ii) bahagian yang di-kehendaki sadikit, di-panggil " Trace Elements." Dzat-dzat yang tergantong kapada "Major Elements" ia-lah nitrogen, potassium, phosphorus, magnesium, calcium dan sulphur. Dzat-dzat ini boleh di-dapati dari baja saperti Potassium nitrate (untok nitrogen dan potassium), Super phosphate (untok phosphorus, calcium dan sulphur), Ammonium sulphate (untok nitrogen dan sulphur) dan Magnesium sulphate (Magnesium dan sulphur), dan yang bergantong kapada "Trace Elements" ia-lah manganese, boron, zinc, iron dan copper. Ini boleh di-dapati dari baja saperti Ferrous sulphate (untok iron), Manganese sulphate (untok manganese), Zinc sulphate (zinc), Boric acid (untok boron) dan Copper sulphate (untok copper).

Champoran baja

Champoran baja ini bergantong kapada jenis2 pokok yang hendak di-tanam. Di-sini di-beri sadikit penerangan berkenaan kehendak2 pokok terutama sa-kali pokok bunga dan sayor-sayoran. Pokok2 yang berdaun tidak berbunga berkehendaki banyak nitrogen dan yang berbunga dan berbuah mahu banyak phosphorus. Tetapi jalan membuat champoran ini payah hendak di-kira-nya dan juga akan mengambil banyak ruangan di-sini, dari itu di-sini di-beri satu daripada champoran yang telah di-chuba di-Maktab Pertanian ini dan juga telah di-dapati berhasil dan sesoi dengan hawa negeri ini.

1. Champoran bagi bahagian yang di-kehandaki banyak "Major Elements."

Nama baja	Banyak yang di-kehendaki (bagi satu gantang ayer)	Banyak yang di-kehendaki (bagi sa-puloh gantang)
Potassium Nitrate	3.96 grams	3.96 x 10= 39.6 grams
Ammonium Sulphate	0.32 „	0.32 x 10= 3.2 „
Super Phosphate	3.38 „	3.38 x 10= 33.8 „
Magnesium Sulphate (hydrated)	1.4 „	1.4 x 10= 14.0 „

Champoran baja ini hendak-lah di-tumbok halus-halus supaya mereka berchapor dengan sempurna. Apabila sudah, hendak-lah di-gunakan tiap-tiap 4.5 atau 5 grams champoran ini untok satu gantang ayer.

2. Champoran bagi bahagian yang sadikit " Trace Element "
Bahagian ini terbahagi kapada dua bahagian :—

(a) Bahagian pertama " iron " memberi dzat besi sahaja. Bagi 800 c.c. ayer„ champor 10 c.c. "concentrated Sulphuric Acid dan kachau sampai sebati. Di-champoran ini (solution) taroh 50 gram Ferrous Sulphate (hydrates), dan tambah ayer lagi sahingga isi padu-nya menjadi 1000 c.c. Daripada 1000 c.c. ini-lah di-ambil 0.2 c.c. (4 titek) untok satu gantang ayer.

(b) Bahagian kadua memberi Manganese, Boron, Zinc dan Copper. Champoran-nya :—

Boric acid	28 gram
Manganese Sulphate	20 „
Zinc Sulphate	2.2 „
Copper Sulphate	2.0 „

Baja-baja di-atas ini di-champor dengan 800 c.c. ayer yang berchampor dengan 10 c.c. " concentrated " Sulphuric Acid dan di-tambah ayer sahingga menjadi 1000 c.c. (saperti (a) juga). Saperti (a) champoran ini chuma 0.2 c.c. (4 titek) untok tiap2 satu gantang ayer.

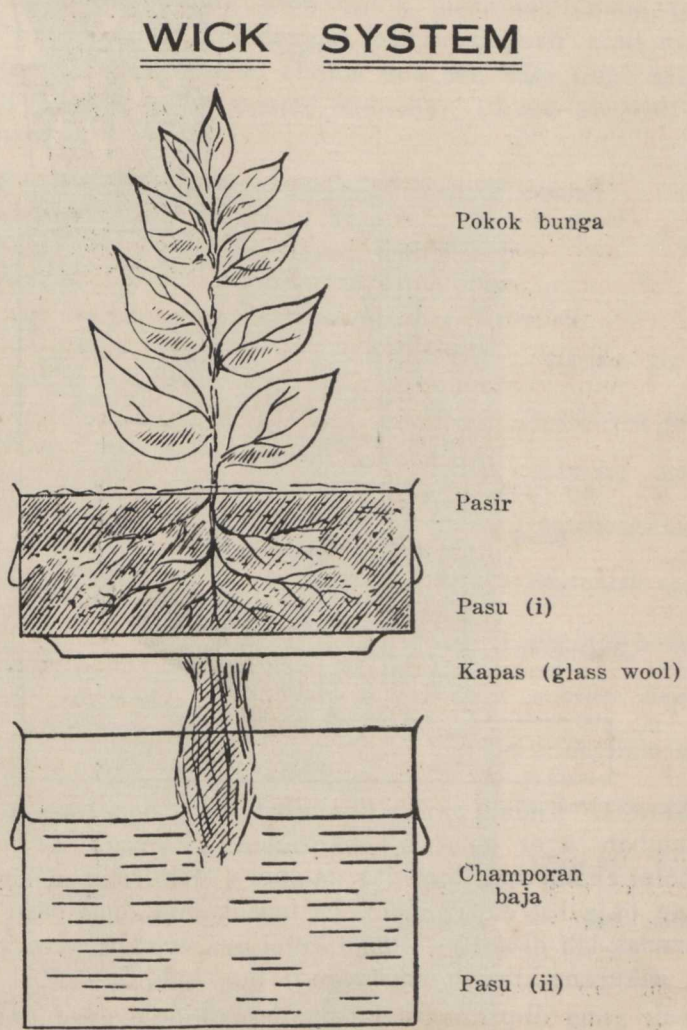
Apabila champoran2 itu siap, maka pada tiap2 satu gantang, buboh bahagian 1. antara 4.5 atau 5 gram (Lebeh kurang satu sudu kopi), dan bahagian 2. (a) dan (b), 4 titek tiap2 bahagian. Sa-lain dari itu tambah-lah ayer apa bila di-dapati kurang. Champoran yang tersebut ini boleh di-pakai sahingga dua bulan. Lepas dua bulan tukar-lah dengan champoran yang baharu. Tetapi oleh sebab hawa negeri ini panas maka dzat besi, bahagian 2. (a) hendak-lah di-tambah sa-titek dua dalam sa-minggu.

Bagitu-lah dengan ringkas-nya chara-chara membuat champoran baja ini yang mana boleh di-beli daripada I.C.I. company.

Chara2 yang elok dan mudah untok pokok bunga.

Ini telah di-chuba di-Maktab di-sini dan telah di-dapati memuaskan

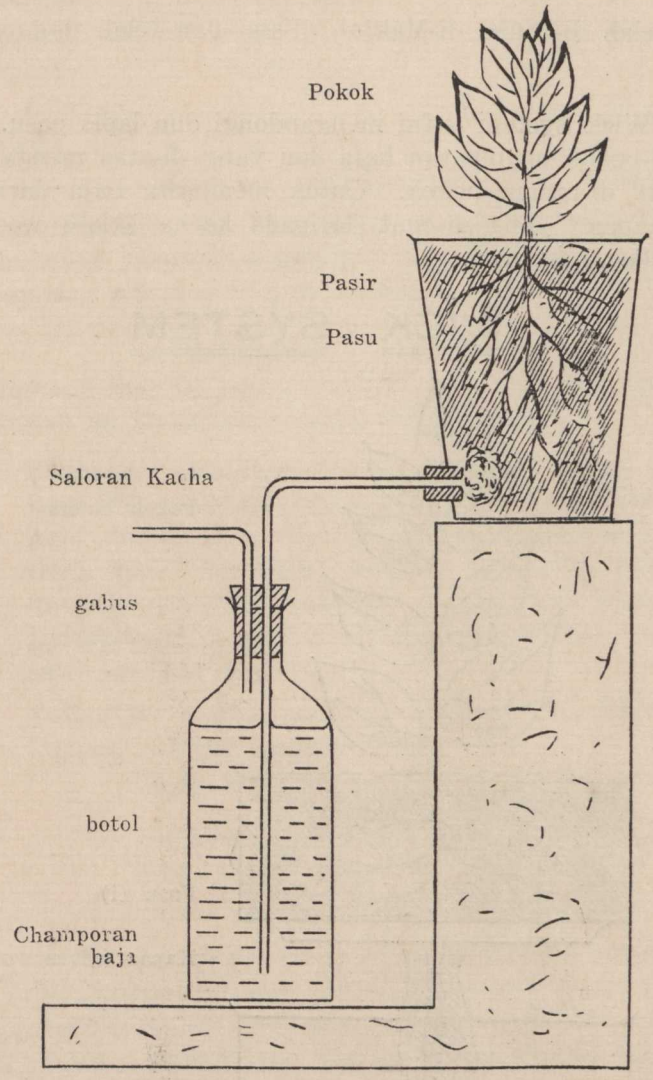
1. "Wick System"—Ini mengandongi dua lapis pasu. Pasu yang di-bawah di-buboh champoran baja dan yang di-atas mengandongi pasir yang hendak di-tanam pokok. Untok membawa baja daripada bawah ka-atas, " kapas " yang di-buat daripada kacha (glass wool) telah di-gunakan sabagai saloran.



2. "Sub-Irrigation System"—Ini mengandongi chuma satu pasu sahaja, dan pasu ini di-penohi dengan pasir yang hendak di-tanam pokok

Baja-nya di-buboh di-dalam sa-buah botol dengan menggunakan saloran getah " tube."

SUB-IRRIGATION SYSTEM



Chara 1. tiadak payah di-angkat, naik dan turn, tetapi hendak-lah di-tambah ayer apabila kekurangan. Chara. 2 hendak-lah di-angkat botol champoran baja itu ka-atas (tinggi daripada pasu) supaya champoran baja itu dapat mengalir masok ka-dalam pasu itu. apabila penoh, hendak-lah di-angkat turun botol-nya semula. Ini hendak-lah di-jalankan sakurang-kurang-nya sa-hari dua kali.

Pasir yang di-pakai itu hendak-lah di-guna pasir daripada sungai oleh sebab pasir ini lebeh kasar daripada pasir laut. dengan itu akar2 pokok itu selalu mendapat oxygen.

Jenis2 bunga yang telah di-chuba ia-lah Phlox, Dhalia, Petunia, Makama Daisy, Begonia Rex dan Rose. berkenaan dengan sayor-sayoran pula ia-lah tomato, lettuce (salad), dan brinjal (terong). Bunga-bunga dan soyor-sayoran ini hidup dengan subor. Jadi ada-lah di-agak bahawa bunga2 dan sayor-sayoran yang lain akan hidup juga.

Faedah-nya.

Ada-lah faedah2-nya menanam pokok2 bunga dan sayor dengan jalan " hydroponics " ini, ia-lah satu daripada-nya kehidupan pokok2 itu dapat di-jaga dengan kehendah hati. Oleh sebab, segala dzat2 makanan dapat di-hadkan. Lagi pula bunga2 yang di-tanam dengan jalan ini memberi warna yang berchahaya dan bunga-nya besar. Bagi tempat2 yang tidak ada tanah yang sesoi untok menanam dalam pasu, maka chuba-lah " hydroponics " ini dengan mengunai pasir atau ayer sahaja. Belanja baja-nya telah di-nelai chuma dua sen bagi tiap2 satu gantang ayer dan ini boleh di-pakai sampai sa-bulan. Chuba-lah hydroponics di-masa ke-lapangan.

Gambar ini menunjokan bagaimana pokok tomato di-tanam dengan chara 'Sub-Irrigation System' Bagitu-lah rupa-nya apa-bila botol yang berisi baja sa-belom di-angkat untok 'champoran' itu mengalir turun ka-dalam p a s u. Lihat-lah buah2 tomato itu bagaimana besar-nya.

Gambar ini menunjokkan tatkala botol itu diangkat untok champoran itu mengalir turun kadalam botol-nya.

Pengisi Sudut

1. Tiada ada pernah menchium bau Sorga ia-lah orang yang memutuskan pertalian kaseh sayang.

2. Menchintai rumah tangga, kaum keluarga, kampong halaman menimbulkan chinta kapada tanah ayer dan kesemua-nya ini pula menimbulkan chinta kapada bangsa dan menimbulkan perasaan kebangsaan.

Di-suson oleh :—
H2

"KEMAJUAN TIDAK DAPAT DI-NILAI DENGAN WANG RINGGIT TETAPI DENGAN PERUBAHAN."

Oleh Belia Melayu.

Bangsa2 yang berkemajuan ia-lah bangsa2 yang mengikut peraliran zaman dan sanggup menerima beberapa perubahan. Sunggoh pun tidak semua-nya perubahan-perubahan itu membawa kebaikkan dan keagongan tetapi sabalek-nya ada juga yang merosakkan dan menelankan kebudayaan dan kesenian, sedikit demi sedikit. Tetapi kemajuan besar dapat di-chapai jikalau kita ikut kata pepatah :—"Jikalau baik buat tauladan jikalau sa-balek-nya buat sempadah."

Di-sini saya tujukan khas-nya kapada bangsa Melayu kerana memandangkan suasana siasah negeri-nya sudah beransor-ansor menjadi cherah dan awan2 gelap berikut lenyap hilang dan Tanah Melayu munkin akan menempoh perubahan besar, berjalan maju menuju ka-arah kemerdekaan. Sa-andai-nya jikalau bangsa Melayu mahu terus maju dan bibas maka bersedia-lah dari sekarang lagi menerima beberapa perubahan.

Maka perubahan2 itu sesunggoh-nya tidak dapat di-laksanakan dalam tempoh yang singkat—satu hari, satu bulan walau pun satu tahun; namum bangsa Melayu mengatorkan tapak dari sekarang lagi dan terus berjalan sa-tapak2 menerima perubahan itu.

Banyak juga daripada bangsa Melayu yang maseh berpegang tegoh kapada peratoran2 kono, konon-nya itu ia-lah pusaka yang di-warisi oleh datok moyang-nya. Masa tetap beredar dan perubahan munkin berlaku. Perkara yang di-pandang agong pada hari ini akan berkubor pada esok-nya.

Mithal-nya perkara yang di-pegang tegoh oleh orang Melayu ia-lah chara2 membuka tanah baru dan menanam padi dan keperchayaan itu dapat pengaroh besar di-kalangan orang Melayu. Bila orang Melayu membuka tanah ia terlebeh dahulu memuja "Penjaga" di-situ dengan chara berpawang. Konon-nya jikalau tidak di-puja takut2 "Penjaga2" di-situ marah dan mereka tidak akan dapat hasil2 yang baik dan memuaskan. Chara2 pujaan menanam padi pula ada bermacham-macham mengikut daerah dan tempat masing2. Satu gulongan menunggu hari baik, baharu mulai menanam. Itu pun berayer tawar dan bernasi kunyit dan ayam panggang. Hasil daripada pekerjaan yang sa-macham ini pun tanam-tanaman tidak juga memberi puas hati dan kadang2 kerosakan (walau pun kerana kekurangan dzat2) munkin berlaku terus menerus.

Orang Melayu tidak dapat mengeluarkan hasil tumboh-tumbohan sa-bagai bangsa2 yang telah berkemajuan di-dalam hal pergunaan jentera. Kuderat tidak dapat menewas jentera. Oleh itu sa-baik-baik-nya elok-lah kita beransor-ansor menerima perubahan walau pun sedikit demi sedikit, dan dapat kita dudok selaras dengan bangsa2 yang berkemajuan. Bukan itu sahaja yang kita patut chontohi tetapi beribu satu macham yang berguna dan dengan itu dapat-lah kita menempatkan bangsa Melayu di-atas nuracha yang mulia.

CHINTA DARI-KU

Oleh Wa' Deng.

Nah, ambil-lah ini,
Pemberian dari-ku.
Bukan permata yang mahal,
Bukan nilam yang ternama,
Tetapi. ! !
Chuma sepatah kata,
"Chinta dari-ku.

Kau nun jauh,
Ta' munkin berjumpa,
Tetapi kau sering menjelma.
Di-ruangan mata-ku,
Siang dan malam, terbayang, termimpi.
Oh ! dinda bila-kah kita bertemu kembali ?

Perchaya-lah ! chinta dari-ku,
Terhadap-mu,
Chinta suchi abadi,
Tetap ta' hilang di-mata,
Dan ta'luput di-hati.
Terima-lah ! chiuman-ku,
Sa-bagai bukti.

Ingat-lah !
Kau yang jauh dari-ku,
Jangan-lah lekas jemu,
Jika rindu datang memangku,
Pelok-lah bantal,
Pelokkan sa-bagai ganti-ku.

Asmah, juita idaman-ku,
Sa-tahun lalu berkejar,
Dua tahun sa-kelip mata,
Perchaya-lah !
Tunggu-lah !
Kedatangan-ku !
Untok melamar-mu.

Harapan-ku tinggi,
Tinggi gunong, tinggi lagi harapan-ku,
Untok menjadikan kau,
Permaisuri rumah tangga-ku,
Yang-ku tetap puja dan rindu,
Buat selama waktu.

PERSATUAN MUSLIM MAKTAB PERTANIAN MALAYA

1. Pegawai-pegawai tahun 55/56 :—

Yang Di-pertua	Che' Zainal Abidin bin Jawi.
Naib Yang Di-pertua.....	Syed Abdul Hadi bin Syed Othman.
Pemangku Setiausaha Agong..	Che' Ismail bin Ahmad.
Penulong Setiausaha Agong...	Che' Baharom bin Muhammad.
Setiausaha Rencham.....	Che' Nayan bin Ariffin.
Penjaga Kutub Khanah.....	Che' Khairi bin Haji Muhammad.
Wakil-wakil.....	Che' Abd. Rahman bin Jaafar.
	Che' Abd. Manaf bin Abd. Rahman.
Pemereksa Kira-kira.....	Che' Othman bin Haji Ahmad.
	Yang Mulia Raja Sharuzzaman.

2. Kejayaan dan kerja tiap-tiap jabatan :—

a. Jawatan kuasa rencham ;

Satu jawatan kuasa rencham telah di-tubohkan dengan Naib Yang Di-pertua sabagai pengurusi-nya dan Setiausaha rencham sabagai setiausaha-nya.

Ahli-ahli Jawatan Kuasa ;

Setiausaha permainan dan pergaulan....	Che' Abd. Halim Hassan.
Setiausaha lawatan.....	Che' Ismail Ahmad.
Setiausaha derma dan kebajikan.....	Che' Yusof Thamby.

Beberapa lawatan telah di-buatkan ka-berapa tempat termasok Tanjong Malim di-mana juga beberapa permainan telah di-adakan. Untok membiasakan ahli-ahli berchakap dan berpidatu, majlis sharahan di-adakan. Orang2 ternama munkin akan di-jemput memberi sharah-sharahan.

b. Kutub Khanah.

Persatuan ini juga ada mempunyai satu kutub khanah di-mana buku-buku Melayu dan Inggeris ada tersimpan. Juga mujallah-mujallah, surat2 khabar, piring2 peti menyanyi ada di-beli.

3. Bahagian'Am :—

a. Satu bilek untok sembahayang telah di-sediakan bagi penuntut-penuntut Muslim sekalian membuat ibadat.

b. Sebagai biasa Persatuan ini telah melantek tiga orang wakil kameshuarat Agong Gabongan Penuntut2 Melayu Semenanjong.

ISMAIL BIN AHMAD,
Pm. Setiausaha agong PMMP/M 55/56.

ANNUAL REPORT OF THE COLLEGE OF AGRICULTURE STUDENTS' UNION.

(Academic Year 1955 — 1956.)

The Nineth Students' Council of the College of Agriculture Students' Union for the academic year 1955 to 1956 took over office on 26th July, 1955. This period may safely be considered to be one of great activities since the inception of the Students' Union nine years ago. These increased activities had been due partly to the initiative of the members and also to the fact that the C.A.S.U. has now entered the phase when it is playing a greater role in the workings of the Pan-Malayan Students' Federation than in the past years. Members who make up the Nineth Students' Council are as follows :—

President.....Mr. Koh Theam Hee.

Vice President.....Che' Mohd. Rashdan b. Baba.

Secretary General.....Mr. Lam Peng Sam.

Asst. Secretary General.....Che' Ahmad Mahidin b. Ulong. Sha'ban.

Students' Welfare Secretary....Raja Shaharuzzaman b. Raja Hussein.

Financial Secretary.....Che' Abdul Rahman b. Jaffar.

Sports Secretary.....Che' Ahmad Mazlan b. Mohd. Yusof.

Literary and Social Secretary..Mr. Liu Chang Lan.

Minor Course Representative...Syed Abdul Hadi b. Syed Othman.

Membership.

This academic year shows an increase in the membership, now being 87 strong. Members are cosmopolitan but this does not prevent the central body from functioning harmoniously.

General Meetings.

The First Annual General Meeting for the academic year 1955—1956 was held on the 26th July, 1955. Besides three other extra-ordinary general meetings were called, one for the amendments to the Union constitution and the other two for the discussion and the eventual taking over by the Students' Union of the catering of food for the entire hostel.

Students' General Store.

The Students' General Store was resuscitated after a lapse of a few months. The Store provides a means whereby members could purchase their daily necessities. Every member is required to buy a minimum of three shares at one dollar per share.

Social Contacts.

It was decided that socials and dances should be a termly affair and this not only serves as a form of recreation, but also as a means to establish social contacts.

Students' Union Telephone.

A telephone was installed in the College premises for the exclusive use of members of the Union only.

Students' Relief Fund.

The Students' Relief Fund was started some two years ago ; the idea being that any members in time of urgent need could withdraw money. Members could deposit any amount at any one time and all deposits are returned to the respective members at the end of the academic year. This meets with justifiable success.

The Third P.M.S.F. Annual Conference.

This year the College of Agriculture Students' Union sent a four-man delegation to the 3rd. Pan-Malayan Students' Federation Annual Conference held in Singapore between 3rd and 5th January, 1956. In the past years the C.A.S.U. sent only two delegates. It was agreed and later adopted by the P.M.S.F. Council that future delegations of the member Unions to the Annual Conference be doubled. The C.A.S.U.'s delegation to the 3rd Annual Conference consisted of the following :

Mr. Koh Theam Hee

Mr. Lam Peng Sam

Che' Mohd. Rashdan b. Baba

Che' Ahmad Basir b. Haji Ibrahim.

First Cultural Festival.

A grand Cultural Festival, the first of its kind, was held in Kuala Lumpur in mid-December, from 20th to 23rd. December, the theme being that the various communities are encouraged to show to the public what the students can do and this included cultural pieces from all the communities in Malaya.

A committee was formed to prepare agricultural exhibits, but the idea had to be abandoned when the C.A.S.U. was informed by the P.M.S.F. that more emphasis should be laid on cultural exhibits only. Anyway the C.A.S.U. did all it could to help at the Festival.

South Malayan Tour.

A party of 33 members toured the South, playing games and visiting places of agricultural interest.

Indonesian Tour.

The P.M.S.F. organised a study and goodwill tour to Indonesia and were guests to the P.P.M.I. The touring party consisted of 14 members, 12 being from the University of Malaya Students' Union and the other two from the C.A.S.U. Messrs Tee Thean Soo and Chua Hood Chuan represented the C.A.S.U. in the tour.

Australian Tour.

The C.A.S.U. did not participate in the Australian tour because too short a notice was given to the C.A.S.U. by the P.M.S.F. Moreover, all members were on vacation.

General.

The Students' Council approached the College authorities for the provision of a Council Room which was finally granted.

Even though there is an increase in the membership this year the central funds still run at a low ebb. This is mainly due to the fact that many more items have been added to the sports section and consequently separate allocations have to be made to the various sections.

Members who are in the final year will be going on an educational tour to Thailand some time in April this year. It is hoped that this will foster closer ties between the two countries.

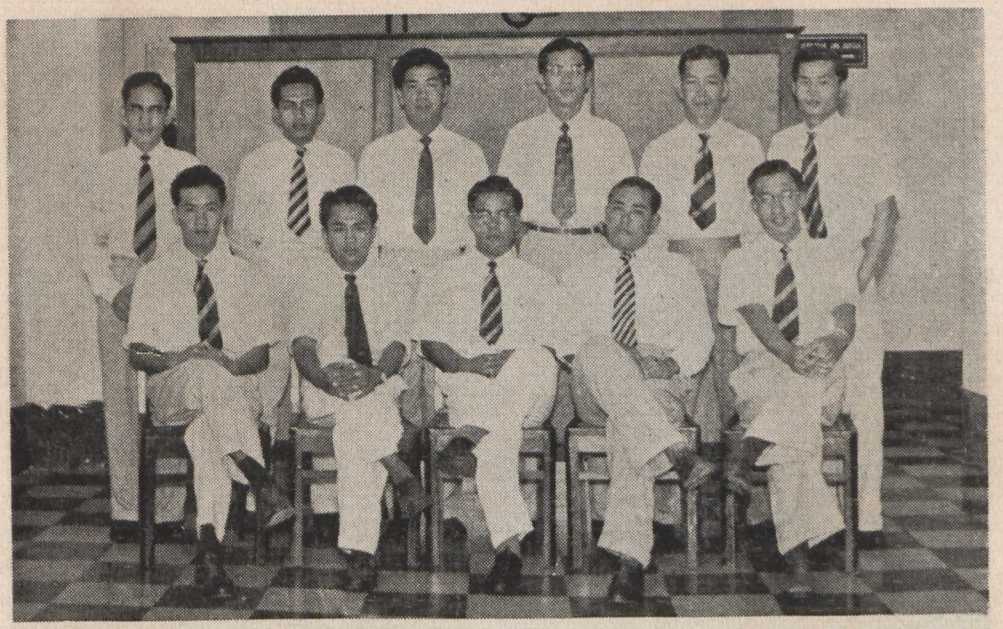
The C.A.S.U. is now contemplating the idea of forming a Young Farmers' Club. With the formation of this club it is hoped to create a greater interest in the various agricultural fields.

Acknowledgments.

The Students' Council wishes to record here its grateful thanks to the various standing committees and sub-committees for their help and co-operation in the management of the affairs of the Union. The Council is also thankful to the Principal, Mr. O. M. Lee for his help and valuable advice.

LAM PENG SAM,
Secretary General,
College of Agriculture Students' Union,
C. A. M.

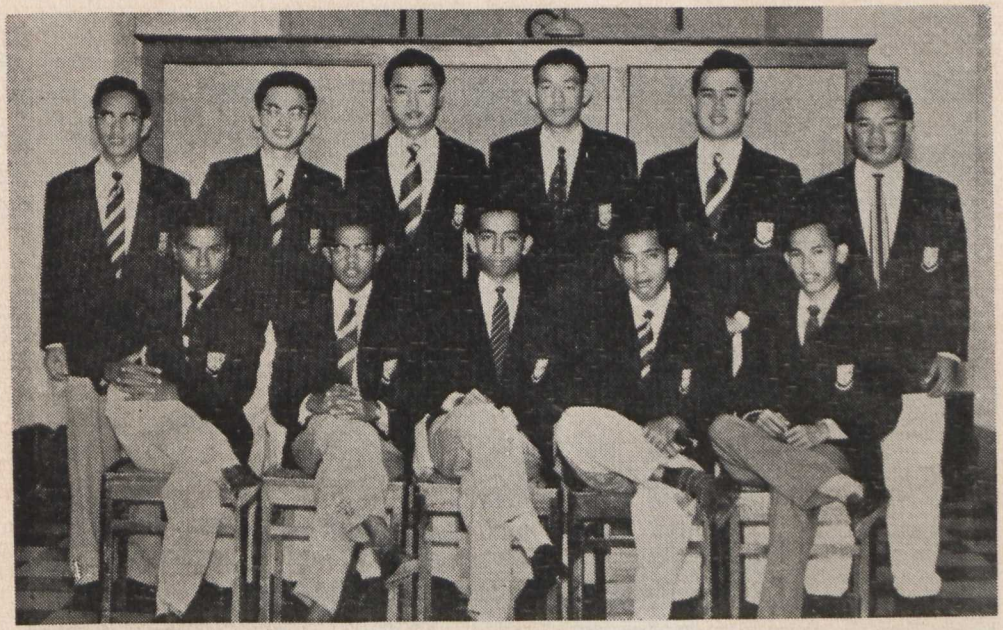
STUDENTS' WELFARE COMMITTEE.



STANDNIG : (L. to R.) Mr. Chang Yew Hong, Che' Osman Md. Noor, Mr. Lee Chin Seong, Mr. Ong Sek Lim, Mr. Soh Ah Leng, Mr. Goh Khek Boon.

SITTING : (L. to R.) Mr. Chin Kim Wah, Che' Mahayiddin, Raja Shaharuzzaman, Che' Baharom, Mr. Kwang Jin.

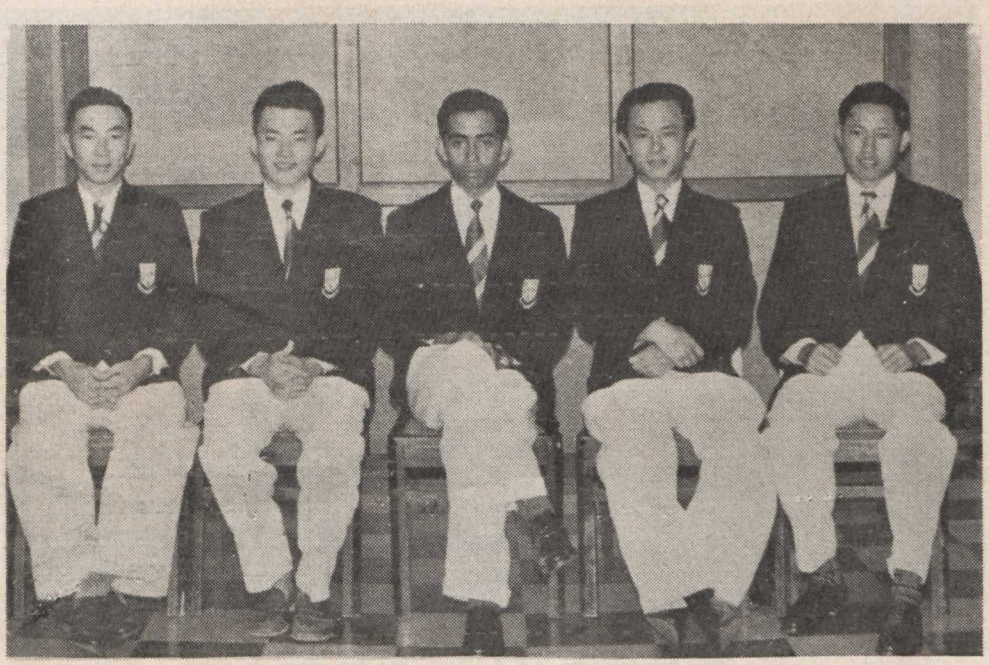
THE SPORTS COMMITTEE.



STANDING : (L. to R.) Chang Yew Hong (T. Tennis Capt.), Soo Swee Weng (Indoor Games Capt.), Low Tuck Peng (Body building Capt.) Mok Chak Kim, (Volley Ball Capt.), Lee Chong Jin (Tennis Capt.), A. Basir (Rugger Capt.).

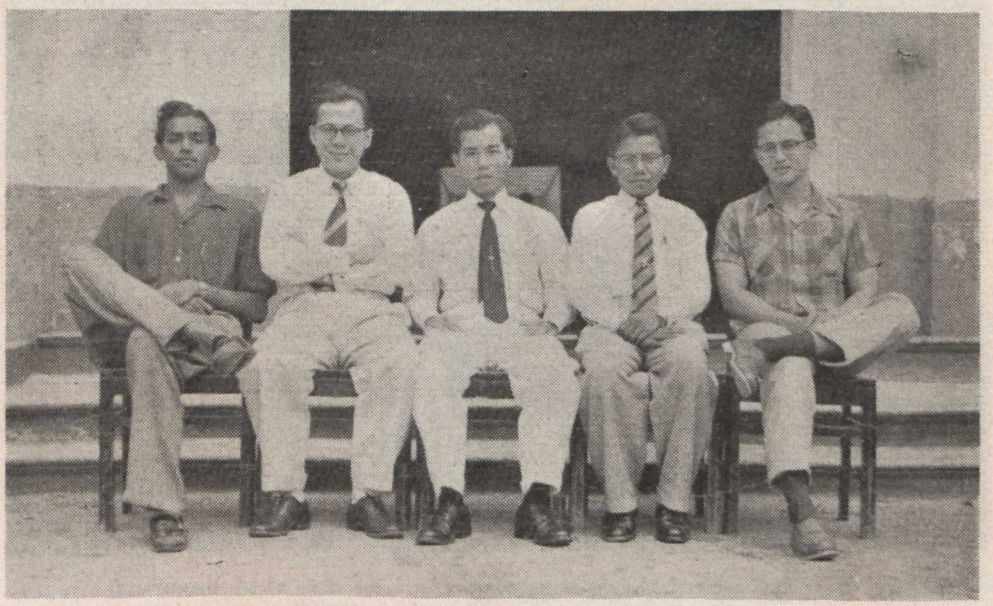
SEATED : (L. to R.) Talib Majid (Hockey Capt.), Nayan Ariffin (Football Capt.), Mohd. Rashdan (Chairman), Mazlan Yusoff (Sports Sec.), Ghazali Sulaiman (Badminton Capt.).

LITERARY AND SOCIAL COMMITTEE.



(L. to R.) Mr. Chen Pershing, Mr. Liu Chang Lan (Literary and Social Secretary), Che' Rashdan b. Baba (Chairman), Mr. Phang Ah Kow, Che' Hoesni b. Abu Bakar.

FINANCIAL COMMITTEE.



(L. to R.) Mr. P. S. Lingam, Mr. Chua Hood Chuan, Mr. Koh Theam Hee (Chairman), Che' Abdul Rahman b. Jaffar (Financial Secretary) Che' Mohd. b. Indot.

REPORT OF THE FINANCIAL COMMITTEE 1955-56.

The members of the Financial Committee are :—

Chairman ..... Mr. Koh Theam Hee.

Secretary ..... Che' Rahman b. Jaffar.

Committee Members ..... Che' Mohd. Indot.)
Mr. P. S. Lingam.
Mr. Chua Hood Chuan.

The three Committee Members were appointed by the Students' Council during its first meeting at the beginning of the academic year.

As usual, the Committee met several times during the past terms to draft estimates of the expenditure for the academic year 1955/56 and to discuss other financial matters. We have so far been able to run successfully in our work, which is largely due to our initiative members, who have sacrificed much of their time for the betterment and smooth running of this Committee.

The estimated budget of the Union for the Financial year 1955/56.

INCOME :	$ cts.	**EXPENDITURE :**	$ cts.
By balance from previous year ..	455.21	To Union Secretariate ..	334.00
Entrance fees ..	250.00	To Sports Committee ..	1160.00
Subscription fees ..	1584.00	Subsidising Union Tour to South Malaya	300.00
Govt. contribution to purchase sports equipments	1000.00	To Litarary and Social Committee ..	1051.00
Cash in Bank ..	54.69	To Welfare Committee	3.00
Total	$3343.90	Total	$2848.00

Total estimated income	3343.90
Total estimated expenditure ..	2848.00
Estimated Balance	495.90

A. RAHMAN B. JAFFAR,
Financial Secretary,
College of Agriculture Students' Union.

STUDENTS' WELFARE COMMITTEE.

The beginning of the academic year 1955/56 once again brought a few changes to the members of the Students' Welfare Committee. The Committee Members for the year 1955/56 were :—

Chairman..... Raja Shaharuzzaman Hussien

Hon. Secretary.....Mr. Tan Kwang Jin

Hon. Hostel Secretary.....Che' Mahayiddin Hamid

Hon. Asst. Hostel Sec......Che' Baharon bin Mohammed

Hon. Secretary & Treasurer
Students' General Store.....Mr. Chin Kim Wah

Hon. Secretary & Treasurer
Emergency Relief Fund.....Mr. Soh Ah Leng.

Dormitory Representatives :—

Faulkner..... Mr. Lee Chin Seong

Tempany..... Mr. Chang Yew Hong

Belgrave.....Mr. Ong Sek Lim

Burnett..... Che Othman Md. Noor

Voelcker.....Mr. Goh Khek Boon.

There had been not much happenings, and not a meeting of the committee was called during the first term, as some of the new members who were also new to their environment were new to their respective jobs too. As a result of two amendments concerning this committee, the Co-operative Store was changed to the Students' General Store, and an Assistant Hostel Secretary was appointed.

HOSTEL :

There had been no improvement made in the furniture and menu of the hostel. Hence, we are still hoping for a number of requests that the Committee had made to the authorities to be approved.

FOOD :

There were several complaints about the vegetables and rice, and all were met with satisfaction. The First Year and Minor Course Students grew vegetables and supplied the Hostel for nearly the whole term. This has helped to retain the catering charge of $1/50 per head per day.

STUDENTS' GENERAL STORE :

The store has not been functioning so far this academic year but it will work in the third term. Thanks should go to its secretary for his co-operation in placing the store at the disposal of the Women's Institute of Serdang for the sale of foodstuffs to the students.

RELIEF FUND :

Collection towards the fund began in August. Some members were reluctant to contribute towards it. Perhaps they had no confidence in it. However, it is hoped that they as well as others will give their support in the coming term. Thanks should go to its secretary for his work in collecting the money. To date the sum is well over $600/-.

GENERAL :

Our thanks to the energetic and hard working chairman who sacrificed his valuable time for the smooth running of the committee.

TAN KWANG JIN,
Secretary,
Students' Welfare Committee,
College of Agriculture
Students' Union.

SPORTS ROUND-UP.

(June 1955 — November '55)

COMMITTEE MEMBERS.

Chairman.....Mohd. Rashdan b. Baba.
Sports Secretary..... A. Mazlan b. Mohd. Yusoff.

CAPTAINS.

Soccer.....Nayan b. Ariffin.
Badminton..... Ghazali b. Sulaiman.
Hockey.....Talib b. Majid.
Tennis..... Lee Chong Jin.
Table-tennis.....Chang Yew Hong.
Indoor-games..... Soo Swee Weng.
Volley-ball.....Mok Chak Kim.
Body building..... Low Tuck Peng
Rugger.....A. Basir b. Hj. Ibrahim.

This academic year began with the loss of some of our last year's promising players. The notable persons being Mr. K. Selvadurai and Mr. Leong Yoon Fook, who have graduated. At present we still have with us a bunch of prominent players, with the coming of the freshmen.

The College soccer, badminton and table-tennis teams are comparatively stronger now than the previous years and this has encouraged us to make a South-Malayan sports tour during our first term vacation. We hope to make another tour to the North in the near future.

The number of our sports enthusiasts seems greater this year that we have introduced three more games to meet their needs. The games are rugger, body-building and volley-ball.

MEETING.

The Sports Committee met twice at the beginning of each term. The main subject under discussion was the approval of the estimates for sports materials sent by the various game captains for each team.

SOCCER.

Many friendly matches were arranged but few were played off. This was due to transport difficulty. Practices were held regularly and the turn-up was good. As time was short after the election of game captains we had only five matches including two during the College South Malayan tour.

RESULTS.

College vs. Forest School, Kepong. 2--5 lost (away).
College Scratch vs. Fed. Expt. Station, Serdang. 0—2 lost (home).
College vs. Fed. Expt. Station, Serdang. 7—0 won (home).
College vs. High School, Malacca. 5—1 won (away).
College vs. Govt. High School, Batu Pahat. 1—1 draw (away).

HOCKEY.

Up to date we had only three matches. As the weather was bad we had few practices. However, the boys applied their old tactics and managed to get on with the game.

RESULTS.

College vs. Indo Ceylonese Sports Club, Kajang 1—0 won (away).
College vs. Methodist Boys' School, K. Lumpur. 0—2 lost (away).
College vs. High School, Klang. 3—3 draw (away).

BADMINTON.

We have almost the same players as we had last year and the boys are quite 'experienced' with the game. With our new cemented outdoor and lighted court and another still in the making, we are looking forward for some more promising players. So far, we have not arranged any match on our court, as distance is the problem to outside teams.

Below are the results of matches played so far.
College vs. High School, Malacca. 3—2 won (away).
College vs. G. H. S., Batu Pahat. 2—3 lost (away).
College vs. English College, Johore Bahru. 1—4 lost (away).
College vs. Agricola Badminton Party, K. L. 0—7 lost (away).

TABLE-TENNIS.

This game is now being played in a vacant space adjoining the Minor Course lecture room. The College players went down to a serious training before the tour and this has resulted in the rise of the standard of the game. The results of matches played are as follows.

College vs. Meng Seng Association, Malacca. 0—5 lost (away).
College vs. High School, Malacca. 3—2 won (away).
College vs. Govt. High School, Batu Pahat. 3—2 won (away).
College vs. English College, Johore Bahru. 4—1 won (away).

TENNIS.

The enthusiasm for this game is shown by the court being occupied on almost every evening. The absence of a coach mars the progress in the game and bad weather hinders the progress they make. No matches against outside teams have been arranged.

BODY BUILDING.

This receives much response from the members. The site for this game is near the Belgrave Dormitory.

VOLLEY BALL.

The court for this game is at a strip adjoining the Belgrave Dormitory. It is hoped that this new game will get a good response from the members.

RUGGER.

We have a good number of rugger players among the students, but as the field is too small, little attention has been paid to this game.

INDOOR GAMES.

We have several indoor games and are being played in the Common Room. These are only for recreational purposes.

TOURNAMENTS.

Open championships for various games with the exception of tennis were held recently. The results are as follows :—

GAMES		CHAMPIONS	RUNNERS-UP.
Badminton	Singles	Ghazali b. Sulaiman	Ajit Singh.
	Doubles	Ghazali & Mohd. Indot	Ajit Singh and Koh Theam Hee.
Table tennis	Singles	Soo Swee Weng	Chang Yew Hong.
	Doubles	Soo Swee Weng & Chang Yew Hong	Ghazali & Ti Teow Yen.
Carrom	Singles	Ajit Singh	Ong Sek Lim.
	Doubles	Zainal Abidin b. Jawi and Othman	Ong Sek Lim and Mohd. Indot.
Chess		A. Rahman b. Jaffar	Ajit Singh.
Drought		Zainal Abidin b. Jawi	Ajit Singh.

An inter-dormitory knock-out competition in all games will be held in the final academic term.

ACKNOWLEDGEMENT.

Last but not least I would like to thank all game captains without whose co-operation little could have been achieved. I also would like to extend my sincere thanks to the boys and well wishers for their kind and generous contributions with which we were able to make a successful sports tour to South Malaya during the first academic term vacation.

A. MAZLAN B. MOHD. YUSOF,
Sports Secretary,
College of Agriculture Students' Union.

COLLEGE SOCCER XI.

BACK ROW : (L. to R.) T. Linga Nathan, Othman b. Hj. Ahmad, Mohamed b. Abu Bakar, Ti Teow Yen, Raja Shaharuzzaman b. Raja Hussein.

MIDDLE ROW : (L. to R.) Mazlan b. Mohd. Yussof, Mok Chak Kim, Chang Yew Hong.

FRONT ROW : (L. to R.) Mohamed b. Indot, Nayan Ariffin, Lee Chin Seong, Ong Yong Seng, Goh Khek Boon.

COLLEGE HOCKEY XI.

BACK ROW : (L. to R.) Othman b. Haji Ahmad, Ajit Singh, Mohd. Noor b. Ibraham, Lee Chong Jin, Hashim b. Shamsudin.

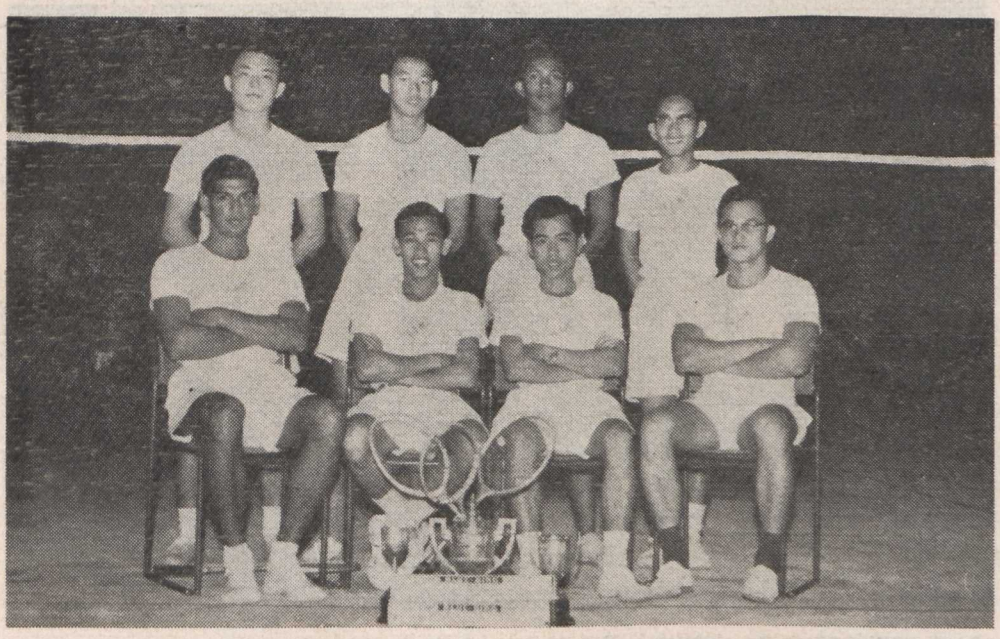
MIDDLE ROW : (L. to R.) Baharom b. Mohamed, Ahmad Basir, Ong Sek Lim.

FRONT ROW : (L. to R.) Talib b. Majid, Mazlan b. Mohd. Yusof, Lee Chin Seong, Chang Yew Hong, Mok Chak Kim.

COLLEGE TABLE-TENNIS TEAM.

STANDING : (L. to R.) Leong Mun Wai, Mok Chak Kim, Ti Teow Yen, Lam Peng Sam.
SEATED : (L. to R.) Soo Swee Weng, Chang Yew Hong, (Capt.), Ghazali Sulaiman.

COLLEGE BADMINTON TEAM.



STANDING : (L. to R.) Liu Chang Lan, Mok Chak Kim, P. S. Lingam, Chang Yew Hong.
SEATED : (L. to R.) Ajit Singh, Ghazali Sulaiman (Capt.), Koh Theam Hee, Mohd. Indot.

REPORT OF THE LITERARY AND SOCIAL COMMITTEE

(June 1955 — Nov. 1955)

The members of the Literary and Social Committee are :

Chairman.....Che' Mohd. Rashdan b. Baba
Literary & Social Secretary Mr. Liu Chang Lan
Film Secretary.....Mr. Phang Ah Kow
Librarian.....Mr. Chen Pershing
Committee Member.....Che' Hoesni b. Abu Bakar.

The Literary and Social Committee with the full co-operation from the committee members Messrs Chen Pershing, Phang Ah Kow and Hoesni b. Abu Bakar, was able to function with smoothness and efficiency. As far as co-operation is concerned the part contributed by members of the Students' Union must not be overlooked. The Committee did its best to ensure external relationships and recreation.

The screening of cinema shows both commercial and educational on every Friday, was of great help to break the monotony caused by the remote situation of the College.

A gala dance was organised on the 16th July, 1955, attended by forty members. It was indeed a great day in the history of the C.A.S.U. Since the inception of the College no attempt was made to hold such a function. It was all due to the help and co-operation of the Principal, staff and members of the C.A.S.U. So keen was the interest shown that a resolution was passed during one of the committee meetings, that the gala dance should be a termly affairs. Accordingly, the second gala dance was held on the 22nd October, 1955.

Twenty new books were added to the Union Library during the first two academic terms.

As for records, twenty-seven including two long-playing records were added to our album.

A farewell tea party in honour of Che' Arif b. Abdul Raman's promotion and transfer to Perlis, was held on the 16th November, 1955. We had the pleasure of having with us at the party the Principal, Mr. O. M. Lee and Mrs. O. M. Lee.

In conclusion, it is hoped that members of the C.A.S.U. will give their whole hearted support and co-operation to the Literary and Social Committee so as to ensure its smooth and harmonious running.

LIU CHANG LAN,
Literary and Social Secretary,
College of Agriculture Students' Union.

THE AGRICULTURAL BIAS SOCIETY

The Agricultural Bias Society of the College of Agriculture, Malaya, came into existence during the 1953/54 academic year. Briefly, the aim of this Society is to create and promote a greater interest in agriculture throughout the country through the publication of an organ called, THE AGRICULTURAL BIAS, featuring mainly news and views on agriculture — Malaya's basic industry. The founder-member and first president was Mr. Khoo Swee Joo. He is now pursuing his Agricultural studies in America.

The following year the Society improved by leaps and bounds. This is attributed mainly to the able leadership of Mr. Lee Buck Heng, the president. The Society is also greatly indebted to the past Editor, Mr. Tan Teo Kim, the Hon. Secretary, Che' Ani bin Arope, and other members of the Executive and Editorial Committees.

The year 1955/56 marks the most successful career of the Society. This is the result of the whole-hearted and enthusiastic support of the 1955/56 first year students without which the Society will be a flop. Our thanks are extended to Mr. G. R. Kurup, who has very generously given the Society the copy right of printing his book, Hints on Hydroponic Culture.

The following office bearers have resigned from the Agricultural Bias Society in the third term :

Vice-President :..... Che' Mazlan b. Yusoff
Editor :..... Mr. Koh Theam Hee.

The Hon. Secretary, Mr. Yeow Kheng Hoe who has rendered valuable service to the Society is now in New Zealand pursuing his studies in agriculture. We wish him every success and good luck.

The following are the new office bearers :

Executive Committee.

President :.....Mr. Yeoh Chong Hoe
Vice-President :..... Che' Ahmad Basir b. Hj. Ibrahim
Hon. Secretary :.....Che' Khairi b. Hj. Mohamed
Treasurer :..... Mr. Soo Swee Weng
Editor :..... Mr. T. Linga Nathan.

Editorial Board.

Editor :..... Mr. T. Linga Nathan
Associate Editor :.....Che' Ismail b. Ahmad
Business Manager :.....Mr. Liu Chang Lan
Hon. Secretary :.....Che' Khairi b. Hj. Mohamed
Art Editor :..... Mr. Leong Mun Wai.

ACKNOWLEDGEMENTS

We acknowledge with thanks the receipt of the following magazines and apologize for any inadvertent omission :

1. The Rafflesian, Raffles Institution, Singapore.
2. King Edward VII Golden Jubilee, Taiping.
3. Our Argosy, A.C.G.S., Ipoh.
4. Magazine of The High School, Bukit Mertajam.
5. Tuanku Muhammad School, Kuala Pilah.
6. The Xaverian, St. Xavier's Institution, Penang.
7. The Silent Signpost, Anglo-Chinese School, Seremban.
8. The Students' Union Magazine, Teachers' Training College, Singapore.
9. Abu Bakar School, Temerloh, Pahang.
10. The Cliffordian, Clifford School, Kuala Kangsar.
11. The Voyager, Anglo-Chinese School, Ipoh.
12. Abdullah School, Kuantan.
13. Methodist Boys' School, Sentul, K. L.
14. The Victorian, Victoria School, Singapore.
15. High School, Kajang.
16. Annual Magazine, St. Anthony's School, Teluk Anson, Perak.
17. The Kijang, Sultan Ismail College, Kota Bharu.
18. The 1955 Gajah, Sultan Yussuf School, Batu Gajah.
19. The Optimist, High School, Malacca.
20. Silver Jubilee Magazine, Tuanku Muhammad School, Kuala Pilah.
21. Anglo-Chinese School Magazine, Singapore.
22. Penang Free School Magazine, Penang.
23. The Chimes, Methodist Girls' School, Malacca.
24. Mahmud School Annual, Raub.
25. English College Magazine, Johore Bahru.
26. The Loyal Pioneer, Anglo-Chinese School, Sitiawan.
27. The Pilot, Govt., High School, Batu Pahat.

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