

# - AAR - NEWS -

## EDITORIAL

Since the last issue, many events have taken place at AAR.

Dr. Soh Aik Chin, as the Head of Agricultural Resources retired at the end of February after a long and illustrious career in the field of oil palm plant breeding. We wish Dr. Soh Aik Chin a happy retirement. However, with the passion as an oil palm plant breeder still burning strongly within him, he remains with AAR as our plant breeding advisor.

Dr. Kee Khan Kiang is now the Director of Research of Applied Agricultural Resources and Advanced Agriecological Research, and Mr. Goh Kah Joo is the Deputy Director of Research. No doubt they will work hand in hand with the Principals to combat the many challenges that now face the Malaysian plantation industry.



Dr. Kee and Mr. Goh have successfully initiated the relocation of AAR's main office in Sg. Buloh to Kota Damansara's Science Park (Selangor). The new building will house the Advisory and Agronomy units, hi-tech Chemistry and Crop Protection laboratories and TQCC.

Other events which took place recently include the ground-breaking ceremony of AAR's Biotechnology Laboratory in Semenyih, Selangor. With such infrastructures, backed by a strong and committed team and researchers, we now have a glimpse into AAR's bright future and what AAR has to offer to the industry.

**Syabas!**

**Happy reading!**

Tasren, NM

### INSIDE THIS ISSUE :

Message from Dr. Kee Khan Kiang	2
<i>Mucuna bracteata</i> : a cover crop and living green manure	3-5
Social and Personal	6-8

*An artist impression of AAR's soon-to-be-built Biotech Laboratory*



*Ground-breaking ceremony of AAR's Biotechnology lab in Semenyih, Selangor*

## ***AAR VISION***

***To be an internationally recognised premier centre for research and development offering excellent products and services in tropical plantation tree crops.***



### ***Message from Dr. Kee Khan Kiang (Director of Research)***



***AAR*** was first established under the leadership of Mr. Chew Poh Soon in 1986 when we moved from HRU (Highlands Research Unit) to Sg. Buloh. Mr. Chew retired in 2000 after 14 years as Head of Agricultural Research. He was succeeded by Dr. Soh Aik Chin FASc, who served for 7 years before retiring in February 2007.

Both Mr. Chew and Dr. Soh are recognized leaders in their own field of expertise and are well known both within Malaysia and internationally amongst oil palm research organizations as well as the plantation industry. Under their outstanding leadership they had made AAR a leading Oil Palm Research Centre of Excellence. We will continue to build on what we had already achieved. Our vision is “*To be an internationally recognized premier centre for research and development offering excellent products and services in tropical plantation tree crops*”.

Over the years we have grown not only in our reputation but in size and numbers. As of January 2007, we have 30 Research Officers, 118 staff and 301 workers under our direct employment. Our best asset is a very strong team of bright, talented and dedicated young Research Officers and many good supporting staff. Our operation now spans both East and West Malaysia and across to Sumatra, Belitung and Kalimantan, Indonesia. We had pioneered the application of GIS/GPS as well as remote sensing technologies in the Plantation Industry. We continue to conduct joint trials with local and foreign universities, the Department of Agriculture, the Malaysian Palm Oil Board and other local and international research organizations. Today we are the world's largest producer of oil palm tissue culture plantlets through our modern Tissue Culture laboratory at Ijok, Selangor. Construction work for a new Molecular Laboratory located at the University of Nottingham Malaysia Campus, Semenyih is now in progress.

We remain committed to providing the best services and products to our Principals and clients through our objectives and activities and supported by a large research and development programme.

## *Mucuna bracteata* - a cover crop and living green manure (Dr. Chee Kheng Hoy FISP)

Note: This article was written by Dr. Chee in mandarin and published in *Agroworld*, Issue No. 188, February 2007, Kuala Lumpur: 30-34. *Agroworld* is a Chinese magazine for farmers. Please read the original article.

(Translated by Soon, S.H.)

A new leguminous cover crop – *Mucuna bracteata* is planted in the interrows of rubber and oil palm. The desirable characteristic of this cover that attracts much attention is its ability to produce three to four times more biomass than conventional leguminous covers. Furthermore, it helps to prevent the invasion of pest and diseases in the fields. Many estate managers are unwilling to spend extra money on planting leguminous cover crop. In fact, after the conventional leguminous cover crop grows under open condition for two and a half years, the remaining litter mulch can effectively provide nitrogen for oil palm replanting.

A *Mucuna bracteata* Seminar was held at Sg. Tekam Plantations Resort, Pahang towards the end of 2006 (29 November). During the 2-day seminar, ten papers on *Mucuna bracteata* (*M. bracteata*) were discussed on the first day while a well-known soil scientist from Malaysia, Dr. S. Paramanathan led us on the identification of different soil profiles on the second day. Param is regarded as an “old friend” to planters from all over the world.

The inspiration to organize the seminar comes from my ex-colleague, Mr. Chiu Sheng Bin, well known amongst many of the agronomists in the industry. Mr. Chiu graduated from Harvard University. He worked as an electrical engineer before he furthered his studies in agriculture. Mr. Chiu and I were invited by Lee Chin Tui (Head of the Agronomy unit at FELDA, Sg. Tekam) to visit oil palm fields planted with the leguminous cover crop *M. bracteata*.

Mr. Chiu felt that we should promote the benefits of the leguminous cover crop. Unfortunately, he spends most of the time working overseas. When I mentioned about the organization of a cover crop seminar again, besides Mr. Lee, Dr. Param and Mr. Goh Kah Joo also gave their full support to us. Goh was elected as chairman of the seminar. Mr. Goh, a graduate from the University of York specializing in biological computation, is currently the Deputy Director of Research of AAR, an associate company of Boustead Plantations Berhad and Kuala Lumpur Kepong Berhad.

The total number of participants for this seminar was about 200 which was more than the expected number. They included planters from Indonesia and East Malaysia.

The seminar ended successfully. Besides the efforts of committee members, the financial and manpower support provided by FELDA was much appreciated. The facilities and research programmes of FELDA Sungai Tekam research station as well as the large-scale FELDA oil palm plantations definitely added much charm to the seminar. The proceeding from the seminar containing a wide range of useful information for planters interested in the crop will soon be published as a book.

### Advantages of leguminous cover crop

*M. bracteata* was first introduced by a senior estate manager, C. Matthews, from Golden Hope Plantations Bhd. (currently working with United Plantations Bhd.) who had imported 2 kg of *M. bracteata* seeds from India back in 1991. The new legume was planted between sapling lines in the rubber plantation in India at that time. Before *M. bracteata* reached Malaysia, I was already involved in research and development. At that time, I traveled not so far from my work place to a *M. bracteata* experimental site in North Labis Estate, Johor belonging to Golden Hope

(please refer to *Agroworld* magazine Issue No. 114, “New legume produces living green manure”).

Beginning with the new *M. bracteata* legume at North Labis Estate, Golden Hope has now planted 30,000 ha. of this cover crop. Golden Hope was the first plantation company to plant *M. bracteata* in Sabah. The first company to plant *M. bracteata* in Indonesia was Lyman Agro. In the early 90’s, Mr. Chiu Sheng Bin and I were conducting research and development on oil palm, rubber and forestry in this company. We introduced *M. bracteata* to Indonesia.

### Prevent young palms from invasion of weeds and pests

Many estate managers are unwilling to spend extra money on planting leguminous cover crops. Somehow the cover crops could not survive under shaded conditions after growing for one to two years. In fact, after the conventional leguminous cover crop eg. *Pueraria javanica* has grown under open conditions for two and a half years, the remaining litter mulch can effectively provide nitrogen to the oil palm for the next two and a half years.

Today, *M. bracteata* cover crop can be found in newly planted or replanted oil palm plantations throughout Malaysia, Indonesia and Colombia, South America. The desirable characteristic of this cover crop is its ability to produce three to four times more biomass (green manure) than conventional leguminous cover crops. Apart from that, it grows luxuriantly and also has the ability to smother weeds (lallang, shrubs and ferns).

Leguminous cover crops are also known to reduce Rhinoceros beetle damage to young palms. The conventional leguminous cover crops can prevent 65% damage while *M. bracteata* can prevent 93% damage. The thick *M. bracteata* can physically prevent the invasion of beetles towards the remaining organic residues after oil palm replanting. On the other hand, it provides a moist environment for oil palm residues to decompose faster.

In addition, *M. bracteata* also interrupts the activities of rats and therefore has the ability to reduce rat damage to the oil palm.

### The mulch is beneficial to barren soil

*M. bracteata* is most impressive as it forms a thick pure cover crop under oil palm, often 1 m thick with 40 cm of litter mulch below. Even under the shade of 10 year old palms, it still maintains 50 mm of litter mulch below the thick cover of *M. bracteata*. It produces large amounts of organic matter through its litter mulch and thus rebuilds poor, degraded soils by enriching them with mulch.

*M. bracteata* seeds do not come cheap. It is about RM 300 per kg, all imported from India. *M. bracteata* originates from Tripura, Northeast India in the Himalaya range. This area is also known as the northeastern hill region of India and it lies between 21.5-29.5° N latitude and 85.5-97.5° E longitude. Temperature varies between 10 and 35° Celsius and average annual rainfall between 1811 mm and 2855 mm. The day length can be as high as 13.6 hours. Fruits are covered by stinging hairs and turn blackish when ripe during winter only.

From botanical records, Bangladesh, China, Hainan, Laos, Myanmar, Thailand, Vietnam and Andaman Island have *M.*

*bracteata* growing naturally but there is no record of whether these places produce *M. bracteata* seeds.

We had tried to plant *M. bracteata* in areas with different latitudes and temperature, for instance “Penang Hill” in Penang and in the highlands of Laos. The legume was capable of flowering but had not seeded. In addition, the flower emits a stinking smell of rotting meat attracting insects. It is said that the hornet is the only type of insect pollinator that visits the flowers.

We need workers to harvest the seed pods produced by *M. bracteata* planted in our experiment. This task is not easy because seed pods are covered with sharp, needle-like hairs that cause great irritation when touched as they penetrate the skin easily. Perhaps, because of this, the workers in India only harvest the seed pods before noon. The weather becomes hot in the afternoon and they return home to “heal their wounds”.

### To judge the seed quality by condition

One of the papers presented in the seminar had mentioned about the seed quality. The seed quality can be judged by its condition: a well formed seed is big and round, about 4700 seeds per kg with germination rate up to 80%. Small and rounded seeds has a lower germination rate of 32% and contains 11600 seeds per kg, while an undesirable seed is big and flat, has about 7400 seeds per kg with a germination rate of only 5%. Poor seeds are small and flat, has about 12000 seeds per kg, and close to 0% germination rate.

A mixture of seeds from the four seed categories above is about 6700 seeds per kg, germination rate is approximately 68%. Briefly, good quality seeds should not exceed 7000 seeds per kg, with a germination rate ranging from 60 to 70%.

The seeds of *M. bracteata* are similar to another cover crop such as *Mucuna pruriens* (which dies within a year). So, planters may easily mistake *M. pruriens* seeds for those of *M. bracteata* when purchasing *M. bracteata* seeds. There is another type of *Mucuna* species called *M. cochinchinensis* which is among the various types of leguminous cover crops that are already planted in the estate. The size of *M. cochinchinensis* seed is two to three times bigger than *M. bracteata*. The leaves are somewhat similar but bigger than *M. bracteata*. *M. cochinchinensis* is an annual crop lasting six to seven months. On the other hand, *M. bracteata* is a perennial crop although it only grows vigorously after planting for nine to ten months.

In estates planted with *M. bracteata*, soil fertility within 30 cm from the topsoil will be maintained. On the other hand, the soil fertility will decrease continuously in areas full of weeds. This is due to the deep-rooted nature of *M. bracteata* which might possibly extract nutrients from the deeper layers of the soil and transport it to the vines and leaves and deposit them on the surface in the form of mulch or organic matter. In addition, higher numbers of bacteria and fungi have been reported under *M. bracteata* compared with under *P. javanica* in rubber plantation in India. These bacteria include N fixing bacteria and phosphate

solubilising microorganisms. Hence, *M. bracteata* improves soil fertility.

### Planting methods

According to a participant from Sabah, the rooting depth of *M. bracteata* is 9 feet and thus it is drought tolerant. After *M. bracteata* was planted at the backyard of his house was frequently mowed, new leaves grew again after some time. Although the survival rate of *M. bracteata* is good, it can still be killed by herbicides.

A participant who has been selling *M. bracteata* seeds for many years and with full of experience in planting *M. bracteata* mentioned that seed handling method for *M. bracteata* is different. It should not be soaked in water in order to enhance the germination rate. If the seed is soaked in water before germination, the germination rate will drop to 10%. The soil medium that is used in the nursery should be sandy loam soil to avoid stagnant water. After sowing, he suggested to put up a plastic cover with the main intention of controlling rainwater. Watering is required once daily.

The quantity of seeds to purchase depends on the number of seedlings of *M. bracteata* to be planted in one hectare of oil palm. According to FELDA, the *M. bracteata* seedlings were planted in the interrows at 4 m apart giving a density of 300 seedlings per ha, reaching full ground coverage after nine months. We planted two seedlings in the interrows at 8 m apart in Indonesia. In fact, every estate has their own planting density, between 130 seedlings per ha and 680 seedlings per ha (5 seedlings of *M. bracteata* per palm).

### Rhizobium bacteria provide nitrogen indirectly

One of the characteristics of leguminous crops is that the root nodules are infected by *rhizobium* bacteria. They are able to fix N from the atmosphere and provide nitrogen to the plant indirectly.

There are many strains of *rhizobium* bacteria. The strains most suitable for *M. bracteata* was discussed in the seminar. The experiment was conducted in Universiti Putra Malaysia to screen *Bradyrhizobium* strains that can effectively nodulate *M. bracteata*. Five *Bradyrhizobium* strains were tested for effectiveness. From the experiment, *M. bracteata* inoculated with isolate UPMR51 achieved the highest growth rate and produced the largest number of nodules with the greatest N concentration.

AAR showed that *M. bracteata* can fix 70% of nitrogen for its own consumption. From the analysis and calculation, absorbing one unit of nitrogen is equivalent to releasing two units of nitrogen to the soil. Hence, *Rhizobium* bacteria provide nitrogen to *M. bracteata* and the rich biomass of *M. bracteata* produces green manure. Can young palms rely on *M. bracteata* to provide all or most of the nitrogen? Agronomists are still conducting research to address this issue. Some smallholders in Indonesia cannot afford to buy chemical fertilizers resulting in



A group photo of some of the participants and seminar organizers at the post-conference soil tour of Jengka Triangle, Pahang.



From left : C. Matthews (who is the first to import *M. bracteata* from India), Z.H. Shamsudin (UPM professor), C.F. Chee (seed supplier), K.J. Goh (seminar chairman), Dr. Chee Kheng Hoy, C.T. Lee (FELDA agronomist), S.B. Chiu (oil palm consultant).



The seminar participants testify that *M. bracteata* enhances the oil palm growth at FELDA plantation.

decreasing oil palm yields. We helped to plant *M. bracteata* in these poor oil palm gardens in order to know how much of the cost of chemical fertilizers we could save for smallholders. EPA reported that from their experiments in oil palm plantations in Johor, after planting for two years, dry weight of *M. bracteata* vine was 5.7 tonne per ha, root and root nodules, 2.5 tonne, stem and leaf, 3.0 tonne, giving a total biomass of 11.02 tonnes. Excluding leaf litter, the total biomass contained P(19kg), K(153 kg), Mg(18 kg). According to the current price of fertilizer, the biomass is equivalent to RM 1066 per ha. According to the Golden Hope research report, the dry weight of *M. bracteata* was 17.2 tonne per ha while the conventional leguminous cover crop produced only 5.7 tonne per ha. However the age of *M. bracteata* and the soil types were not reported. Using *basaltic* soil, dry matter production increased up to 19 tonne (11 tonne from vine, 8 tonne from leaf litter).

**Less plant disease problems**

*M. bracteata* has less plant disease problems. This may due to its high concentration of phenol, thus it is able to avoid being attacked by other creatures. However, young plants (less than 6 months old) are palatable to cattle but not goats.



*M. bracteata* flowered under a special environment locally. This is the research result of S.B. Chiu. Although it has flowered, research is still needed on how to make it seed.



*M. bracteata* produces large amounts of organic matter through its litter mulch. It becomes an extra source of nutrients for oil palm.



*M. bracteata* grows luxuriantly and vigorously under oil palm shade.



*M. bracteata* planted in FELDA nursery. These seedlings can be transplanted to the field during suitable weather.



Currently, *M. bracteata* is well known in the plantation industry. It has proven to be an useful cover crop.

**Seminar on *Mucuna bracteata*: A Living Green Manure & Soil Familiarisation Tour (Jengka Triangle) (Sg. Tekam, Pahang) (29<sup>th</sup> November – 1<sup>st</sup> December 2006)**



**AAR's agronomist who attended the seminar.** (From right: Mr. Goh Kah Joo (Deputy Director of Research), Heriansyah, Sim Choon Cheak, Tasren Mahamooth, Teo Chor Boo, Shahrakbah Yacob, Arif Sugandi, Asraf Muhammad Idrus, Ooi Ling Hoak, Totok Suswanto, Goh You Keng.

# S O C I A L   A N D   P E R S O N A L



*Dr. Soh receiving a gift from Dr. Kee at his farewell dinner.*



*Mr. Patrick Ng (second from the left) was presented to the Queen of United Kingdom on the 10<sup>th</sup> of November 2006. Having being offered a Chevening scholarship, he is currently pursuing his Master of Science degree in Environmental Engineering from Imperial College, University of London, UK.*

## CONGRATULATIONS!

### NEWLY CONFIRMED RECRUITS (JAN' 2007)



**Dr. Tasren b. T R Mahamooth** (a Malaysian) was born in Southport, United Kingdom and raised in Kuala Lumpur where he had his primary and secondary education at Garden International School. He completed his A'levels from Broxtowe College, Nottingham, UK and then obtained his Bachelor of Science with Honours in Environmental Science, minoring in Management studies from the University of Sussex, Brighton, UK. He then went on to further his education and obtained a Master of Science in Molecular Life Sciences Research from King's College, University of London, UK. In 2001, he was offered a scholarship by the UK Engineering and Physical Sciences Research Council (EPSRC) to pursue his doctorate studies under the supervision of Prof. Richard Cammack and Prof. Jeremy Mason at King's College, University of London, UK. In October 2005, he was awarded his Doctorate of Philosophy in Microbiology. He returned to Malaysia in December 2005 and started his duties at AAR beginning May, 2006.



**Totok Suswanto** originated from Blitar, East Java Province, Indonesia where he received his primary and secondary education. He obtained his Bachelor of Science with Honours (Cum Laude) in Agro-Industrial Technology from Bogor Agricultural University in 2000. After completing his degree, he worked in the private sector in Jakarta as a

Management Development Programmer (2000-2002). In 2002, under the scholarship granted by the Malaysian government, Ministry of Science, Technology and Environment Malaysia, he pursued his Master's degree in Universiti Putra Malaysia (UPM). Upon completing his degree in 2005, he worked as a Research Assistant in UPM. In June 2006, he joined Applied Agricultural Resources and has now been recently relocated to AAR's Indonesian sub-station in Pekanbaru, Indonesia.



**Sim Choon Cheak** born on 17th Feb 1983 in Bukit Mertajam, Penang. Upon completing his STPM in 2002, he continued his studies in Biotechnology at UPM in June 2003 and completed his degree in 2006 with first class honours. During his final year of studies in UPM, he specialised in Environmental Biotechnology. At the same time, he worked as a

Research Assistant in Transgenic Lab in Mardi. Upon completing his bachelor degree, he joined AAR as an agronomist. His main activities are in oil palm agronomy, soil survey, soil suitability studies and also terrain analysis. Currently he is involved in AAR seed production work where he is responsible for the laboratory's daily operation and quality control.

## AWARDS

- |                                 |   |
|---------------------------------|---|
| <b>Retirement</b>               | - Mr. Ooi Ling Hoak                                     |
|                                 | - Pn. Hjh. Sulimah bt. Osman                            |
| <b>25 years</b>                 | - Mr. V. Subramaniam (Balau Substation)                 |
| <b>10 years (Staff)</b>         | - Mr. C. Selvarajah (Main Office)                       |
|                                 | - En. Abdul Razak bin Musa (Main Office Field)          |
|                                 | - Mdm Lynda Ann a/p Lourdernathan (GPS/GIS)             |
|                                 | - En. Mahadi bin Pordi (Paloh Substation)               |
|                                 | - En. Azman bin Talip (Paloh Substation)                |
| <b>10 years (Workers)</b>       | - Mdm. A. Parvathy (Balau Substation)                   |
|                                 | - Mdm. P. Vesirletchumy (SP Lab.)                       |
|                                 | - Mr. M. Mathan (Coalfields)                            |
|                                 | - Mr. S. Swaminathan (Main Office)                      |
| <b>Initiative</b>               | - Mdm. M. Vanaja/Pn.Junainah bt. Ismail (Comp. Section) |
|                                 | - Miss R. Kalliamah (TC Lab.)                           |
|                                 | - Pn. Nor Afrida bt. Mawardi (Paloh Substation)         |
| <b>Dedication</b>               | - Mr. S. Muneswaran (Paloh Substation)                  |
| <b>Outstanding new employee</b> | - En. Mohamad Fadzli bin Ali (GPS/GIS)                  |

# CONGRATULATIONS!

## PROMOTIONS

<i>Name</i>	<i>Section</i>	<i>Designation</i>
Mdm. Tan Lei Hong	Analytical Services	Research Officer
Mr. Wong Choo Kien	Plant Breeding	Asst. Res. Officer II
Mdm. Petronella G Ah Tung	Analytical Services	Asst. Res. Officer II
Miss Soon Siao Hwei	Data & Info Management	Asst. Res. Officer II
Puan Nor Azura bt. Annuar	Tissue Culture	Asst. Res. Officer II
Miss Choo Chin Nee	Tissue Culture	Asst. Res. Officer II
Puan Siti Norasikin bt. Hj. Mok-sen	Main Office	Res. Clerk (SG)
Mr. Selvarajah a/l Chandran	Main Office	Res. Clerk (I)
Puan Nor Afrida bt. Mawardi	Paloh Substation Office	Res. Clerk (III)
Puan Mariam bt. Meeran Sahib	Paloh Substation Office	Res. Tech. (IV)
En. Zainuddin bin Hussin	Paloh Substation Field	Res. Asst. (II)
En. Mahadi bin Pordi	Paloh Substation Field	Res. Asst. (II)
Mr. Suresh a/l Selvaraj	Paloh Substation Field	Res. Asst. (III)
En. Roslan bin Mohd. Ariffin	Main Office Field	Res. Asst. (III)
En. Ahmad Zulkarnaen bin Hamdin	Main Office Field	Res. Asst. (III)
En. Amiruddin bin Aziz	GPS/GIS	Res. Asst. (III)
Puan Hatina bt. Muhamed	Tissue Culture	Lab. Asst. (SG)
Cik Noraini bt. Ismail	Tissue Culture	Lab. Asst. (II)
Puan Noraniah bt. Anday	Tissue Culture	Lab. Asst. (II)
En. Mohd Kamal bin Othman	Chemistry Laboratory	Lab. Asst. (II)
Mr. Mathan a/l Maniam	Coalfields Substation	Res. Tech. (IV)

## Marriage

- ♥ Mr. C. Selvarajah to Miss S. Sivasakthi on 10/3/2007.
- ♥ En. Amirudin bin Aziz to Cik Nurul Wahida bt. Hashim on 13/3/2007.
- ♥ AAR's tissue culturist Miss Choo Chin Nee to Mr. Foo Yoke Sang on 27/05/2007.



*We would like to take this opportunity to wish the newlyweds our Heartiest Congratulations and Best Wishes.*

## Birth

- \* En. Abdul Rassid bin Mohamed on the birth of his daughter Nur Addlina Addlin on 14/11/2006.
- \* Pn. Norazura bt. Anuar on the birth of her twin boys *Qayyim Qadry (left)* and *Qayyim Qashry (right)* on 12/12/2006.



- \* Dr. Shah Bah Yacob on the birth of his daughter *Aleeya Zahral* on 20/12/2006

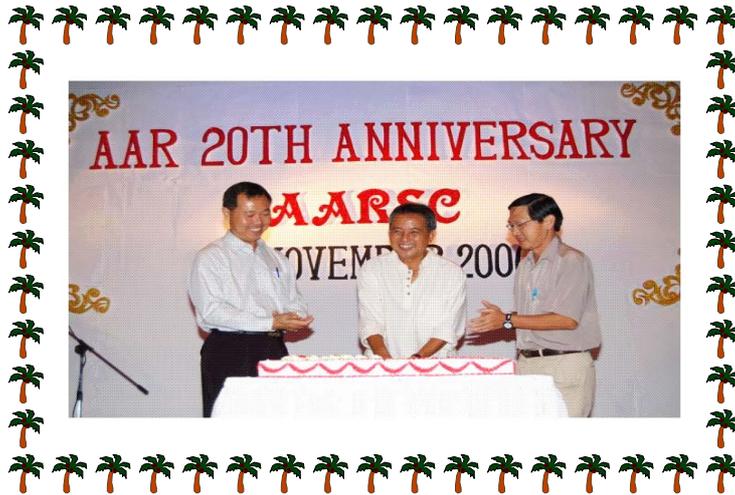


## Famous quotes:

Being thus prepared for us in all ways, and made beautiful, and good for food, and for building, and for instruments of our hands, this race of plants, deserving boundless affection and admiration from us, becomes, in proportion to their obtaining it, a nearly perfect test of our being in right temper of mind and way of life; so that no one can be far wrong in either who loves trees enough, and everyone is assuredly wrong in both who does not love them, if his life has brought them in his way.

- John Ruskin, 1819-1900, *Modern Painters VI*

## AARSC 2006 HIGHLIGHTS



**2006** was another exciting and memorable year for AAR Sports Club. We did not plan for too many events as we were gearing up for our annual dinner, which was also to commemorate AAR's 20<sup>th</sup> Anniversary, at the end of the year. However, we managed to plan for an annual trip to Genting Highlands, where more than 110 members joined in the fun-filled trip. In conjunction with the company's 20<sup>th</sup> anniversary, a company shirt was specially designed to portray AAR's image in the 21<sup>st</sup> Century. Since then, our members proudly wear the shirts during special occasions. The climax of the year however, was the much anticipated annual dinner. A record number of over 400 participants graced the event which was themed "Night of Glamour". The arrival of the VIPs from our principals, TPSB and BEA, heightened the momentous glamorous atmosphere. Professional DJs spiced up the event with lively music as well as jokes. A professional magician charmed the guests with realistic magic shows, engaging some participants in a few thrilling or funny acts. Different sections/substations presented dances and other musical performances which captured the attention of guests throughout the lively event. Prizes were given to the best dressed male and female participants. They were chosen based on how well they portrayed the dinner's theme. Awards were also given to well-deserving employees either for their long service in the company or for their outstanding performances. Tokens of encouragement were given out to members' children who did well in various government exams. During the event, a whopping 10 kg cake was officially cut on stage by Dr. Soh Aik Chin (the then Head of Agricultural Research), Dr. Kee Khan Kiang (current Director of Research) and Mr. Goh Kah Joo (current Deputy Director of Research). The ceremony was accompanied by the vibrant song, "The Final Countdown". Upon the cutting of the cake, some 1000 balloons were released. The young and the young at heart had a wonderful time attempting to collect as many balloons as they could.

**Goh, YK (AARSC President, 2005-2006)**



***AAR 20th Anniversary Annual Dinner (AARSC)***