AAR NEWS

EDITORIAL

MR. ONG TEE SAN, one of our senior agronomists, retired in April 2001 after an illustrious career with KLK and subsequently with AAR. He was mainly involved in rubber agronomy and advisory. One of his favourite areas of interest was ensuring leaf disease in rubber be kept under control. Towards this end he devoted much time and energy in evaluating machines to control Oidium secondary leaf fall (SLF). Progressing from the portable sulphur duster carried by two workers, he moved to the Maruyama and Stihl knapsack duster which could be handled by one person. Not happy with the work output, he tried various other machines and finally hit the jackpot with the tractor mounted Emdek turbo spin duster. Work rate improved tremendously from 1-1.5 ha/hr using the knapsack duster to 10 ha/hr with the Emdek duster. Currently all estates with clones susceptible to Oidium are using the Emdek duster to control the disease, thanks to Tee San. We wish this fine gentleman a happy retirement.

In this era of IT, much physical work can be reduced/replaced by monitoring systems conferred by computer chip gadgets. In addition to improving work efficiency , more accurate reports may be produced more quickly enabling the user to make more informed decisions. The paper on innovations to management practices by Ooi Ling Hoak *et al* would hopefully assist managers in this area.

CHAN, W.H.

CONTENTS

Innovations to Management Practices in Oil Palm Estates

ISP National Seminar: Strategic Directions for The Sustainability of The Oil Palm Industry. 11-12 June 2001 Shangri-La's Tanjung Aru Resort, Kota Kinabalu, Sabah

By

Ooi Ling Hoak, Tey Seng Heng and Patrick Ng Hong Chuan

This paper reports two recent innovations on management practices in oil palm estates i.e. automatic tracking and monitoring of mechanical fertilizer spreader, and automation of data acquisition in the field. They have good potential in improving the efficiency of fertilizer usage and of the estate personnel in their work.

A locally assembled Automatic Vehicle Tracking System (AVTS) evaluated was able to provide near real-time tracking and monitoring of a fertilizer spreader working in the field on the computer monitor screen from the estate office. Some of the useful information that could be obtained was the identity of the fertilizer spreader, its location and speed, date and time, and the aperture opening of the spreader. By integrating a digital map of the estate into the WinFleet plus™, a fleet-management software that came with the AVTS, the movements of the vehicle could be tracked on the estate map.

The data from the AVTS could be exported to MapInfo, a Desktop Geographical Information System (GIS) software, to generate a footprint map of the area covered by the spreader. With this map, it was possible to compute areas that have been manured and also pick up areas that have been missed. The information obtained could be used to compute the average rate of fertilizer applied. The foregoing information could assist the Estate Managers and Agronomists to manage the use of fertilizer on the estates more efficiently.

With appropriate modifications, the AVTS could also be used to track and monitor vehicles deployed for other fieldwork such as weeding and transportation of fresh fruit bunches.

In regard to acquisition of data in the field, handheld digital devices such as Personal Digital Assistants (PDAs), and barcode readers could be used to collect the field data.. A promising way of automating and simplifying the yield recording in the field is to weigh the fresh fruit bunches (ffb) with an automatic weighing device. It should be possible to connect the weighing device to an on-board computer and printer to produce an instant print out of the ffb weight with other relevant details and give it to the harvesters concerned on the spot. Payment to harvesters based on weight would be simpler and *probably more accurate than the conventional method based on bunch count.*

Acquisition of yield and other field data in a digital format would obviate the need for double entry of data thus eliminating errors due to keying-in. The digitally acquired data could be integrated with appropriate databases to generate reports including check rolls that are required by the interested parties. Automating the production of reports would reduce paper work in the office and free the field personnel to do more work in the field.

The digital data could also be processed into useful information and knowledge to assist the Estate Managers to make more informed decisions.

The cyclical nature of the commodity prices has once again adversely affected the plantation sector. The low palm oil prices coupled with the ever-increasing cost of inputs have forced many plantation companies to improve efficiency and reduce inputs including fertilizer in an attempt to reduce production cost.

This paper reports two recent innovations on management practices, which have good potential in improving the efficiency of fertilizer usage and of the estate personnel in their work. They are:

1) Automatic tracking and monitoring of mechanical fertilizer spreader
2) Automation of yield data acquisition in the field

1) Automatic tracking and monitoring of mechanical fertilizer spreader

Fertilizer is the most important input both in terms of cost and its effects on palm growth and yield in most oil palm estates. To achieve the best results, application of fertilizer must be monitored closely to ensure that they are applied correctly in terms of timing, placement and rate. The cost of fertilizer alone, excluding labour for inland soils could work out to RM500 ha^{-1} (Ong, 2000). Tan (1988) estimated that fertilizer constituted about 24% of the total cost of palm oil production in Malaysia. Goh *et al.* (1999) reported that uneven fertiliser application due to poor supervision in a new large oil palm plantation in West Kalimantan resulted in more than 50% reduction in the yield of the palms farthest away from the road.

One of the major problems faced by an Estate Manager nowadays is how to keep track of and monitor the fleet of vehicles deployed for various fieldwork over a large geographical area of the estate. Ooi and Tey (1998) reported that mechanical application of fertilizer could be monitored with the Global Positioning System (GPS). The ability to track and monitor the fleet of vehicles automatically from the estate office would be an advantage.

A locally assembled Automatic Vehicle Tracking System (AVTS)[1] was evaluated for tracking and monitoring the application of fertilizer in an oil palm estate. An existing fertilizer spreader, also a locally manufactured product (Emdek)[2], was modified to accommodate ten magnetic sensors to measure the aperture opening of the spreader.

1: CFL Technology (M) Sdn. Bhd, 43, Jalan Jejaka 2, Taman Maluri, Cheras, 55100 Kuala Lumpur, Malaysia.
Tel: +603 9858062 Fax: +603 9850162
Email: aeco@pd.jaring.my

2: Emdek Sdn Bhd, 22, Jln. Lombong Emas 8, Seramban Light Industrial Park, Jln. Tun Dr. Ismail, 70200, Seramban, Negeri Sembilan, Malaysia. Tel: +606 7641320,
Fax:+ 606 764 1310, Email: cflai@pop.jaring.my

The Automatic Vehicle Tracking System

The system comprised a Mobile Control Unit (MCU) mounted under the canopy of the tractor to acquire data on the fertilizer spreader and to enable communication with a Central Monitoring Station (CMS) located in the estate office. The MCU was made up of a "black box" containing a GPS receiver and a GSM module, external GPS and GSM antennae and magnetic sensors to measure the aperture opening of the fertilizer spreader. While the CMS consisted of a personal computer loaded with WinFleet plus™, a fleet-management software, a GSM cellular phone and an interface box. The CMS receives data from the tractor on-line through the Global System for Mobile (GSM) module of the MCU using the Short Message Service (SMS) facility provided by the GSM system.

The data acquired by the AVTS could be used in the following ways to assist the estate personnel in managing the application of fertilizer:

1) Information in the form of text messages
2) Display vehicle positions on digital maps
3) Information exported to other application software for further processing.

Information in the form of text messages

A sample of the text messages obtained with a prototype AVTS is tabulated in Table 1 below:

TABLE 1 : A SAMPLE OF THE TEXT MESSAGES OBTAINED WITH A PROTOTYPE AVTS

REF	Vehicle	Date/Time	Latitude	Longitude	Position	Speed	Message
24	No.2	09.05.2001 09:16	2.848611	101.880278	1 km north-west from Mantin	0	Sensor 1 On
25	No.2	09.05.2001 09:16	2.848611	101.880278	1 km north-west from Mantin	0	Sensor 1 On
28	No.2	09.05.2001 09:19	2.848611	101.880278	1 km north-west from Mantin	0	Sensor 1 On
29	No.2	09.05.2001 09:20	2.848611	101.880278	1 km north-west from Mantin	0	Sensor 1 On
30	No.2	09.05.2001 09:21	2.848611	101.879722	1 km north-west from Mantin	3	Sensor 1 On
31	No.2	09.05.2001 09:22	2.848611	101.879167	1 km north-west from Mantin	6	Sensor 1 On

If the Estate Manager is unable to go to the field to check on the fertilizer spreader, he could rely on the near real-time text messages displayed on the computer monitor screen and get a clear picture of what is going on in the field from in his office.

Among other things, he could use the data acquired to monitor the following:

1) Time when the tractor started its engine

REF	Vehicle	Date/Time	Speed	Message	Information acquired
1	Vehicle 2	09.05.2001 09:10	0	PWR UP (9/5 9:10)	Vehicle 2 started its engine at 9.10 a.m.

From the above message, he would be able to know that vehicle 2 started its engine at 9.10 a.m. on 9-5-2001.

2) Time when the tractor left the garage

REF	Vehicle	Date/Time	Speed	Message	Information acquired
29	Vehicle 2	09.05.2001 09:20	0	Sensor 1 On	Vehicle 2 started its engine at 9.10 a.m.
30	Vehicle 2	09.05.2001 09:21	6	Sensor 1 On	

From the above message, he would be able to know that vehicle 2 left the garage for trial work in the field at 9.21 a.m. on 9-5-2001.

3) Time taken to fill up the spreader hopper with fertilizer

REF	Vehicle	Date/Time	Speed	Message	Information acquired
93	Vehicle 2	09.05.2001 11:12	6	Sensor 1 On	Travelling to fertilizer dump
94	Vehicle 2	09.05.2001 11:13	0	Sensor 1 On	Loading 500 kg AC into fertilizer spreader hopper in 4 minutes
95	Vehicle 2	09.05.2001 11:14	0	Sensor 1 On	
96	Vehicle 2	09.05.2001 11:15	0	Sensor 1 On	
97	Vehicle 2	09.05.2001 11:16	3	Sensor 4 On	Started applying fertilizer

From the above message, he would be able to know that vehicle 2 took four minutes to load 500 kg of Ammonium Chloride (AC) into the spreader hopper.

4) Aperture of the spreader and the time taken to apply a hopper load of fertilizer

The above table indicates that the operator set the spreader to aperture 3 (corresponding to sensor 4 and calibrated to apply 1.5 kg AC per palm) to commence manuring at 11.16 a.m. but changed it to aperture 5 (corresponding to sensor 6) when he detected that the fertilizer, which was partially caked, was not discharging at the desired rate (an experienced operator could detect gross differences visually). It took 54 minutes (from 11.16 a.m. to 12.10 p.m.) to apply a load of 500 kg AC. This was longer than usual because of the poor AC quality. It must be pointed out that for mechanical application, the fertilizers used should be free flowing to achieve a satisfactory result. It is extremely difficult to calibrate and apply fertilizers that do not flow freely as was the case above.

REF	Vehicle	Date/Time	Speed	Message	Information acquired
96	Vehicle 2	09.05.2001 11:15	0	Sensor 4 On	The operator set the spreader to aperture 3 to commence manuring
97	Vehicle 2	09.05.2001 11:16	3	Sensor 4 On	Commenced manuring
98	Vehicle 2	09.05.2001 11:17	3	Sensor 4 On	
117	Vehicle 2	09.05.2001 12:07	3	Sensor 4 On	The operator changed the spreader to aperture 5 on detecting poor discharge of partially caked AC
178	Vehicle 2	09.05.2001 12:08	3	Sensor 4 On	
179	Vehicle 2	09.05.2001 12:08	3	Sensor 4 On	
180	Vehicle 2	09.05.2001 12:09	3	Sensor 4 On	
182	Vehicle 2	09.05.2001 12:10	0	Sensor 4 On	Completed spreading 500 kg AC in 54 minutes

The other information that could be obtained from the text message of the AVTS are:

1) Downtime of the tractor.
2) Number of hopper loads and amount of fertilizer applied per day.
3) Time when the tractor completed manuring and returned to the garage.

It is also possible for the Estate Manager to set the time interval for the MCU to report to the CMS in his office. For example, if a particular vehicle needs to be monitored closely, then the vehicle could be set to report frequently, for example at every one minute intervals. On the other hand, if it is only necessary to track the vehicle at hourly intervals, then the MCU can be requested to report accordingly. The Manager can vary the frequency of reporting at any time from his office. An example is given below:

Display Vehicle Positions on Digital Maps

REF	Vehicle	Date/Time	Speed	Message	Setting time interval for MCU to report to CMS from the office
109	Vehicle 2	09.05.2001 11:32:00	3	Setting position report time interval to 1 min	
110	Vehicle 2	09.05.2001 11:33:00	3	T1=1	Vehicle reporting every minute
111	Vehicle 2	09.05.2001 11:34:00	3	Sensor 5 On	
112	Vehicle 2	09.05.2001 11:35:00	3	Sensor 5 On	
113	Vehicle 2	09.05.2001 11:35:32	3	Setting position report time interval to 60 min	
114	Vehicle 2	09.05.2001 12:36:00	3	T1-60	Vehicle reporting every 60 minutes

By integrating the estate's digital map into the WinFleet plus™ fleet-management-software, it was possible to monitor the paths taken by the fertilizer spreader and display the vehicle positions on the map as shown in Figure 3.

This method of monitoring would enable an Estate Manager to track his fleet of vehicles working in the field easily from his office without having to travel to the work sites.The smallest version of the WinFleet plus™ fleet-management-software could track 10 vehicles.

Exported to MapInfo, a Desktop Geographical Information System (GIS) software

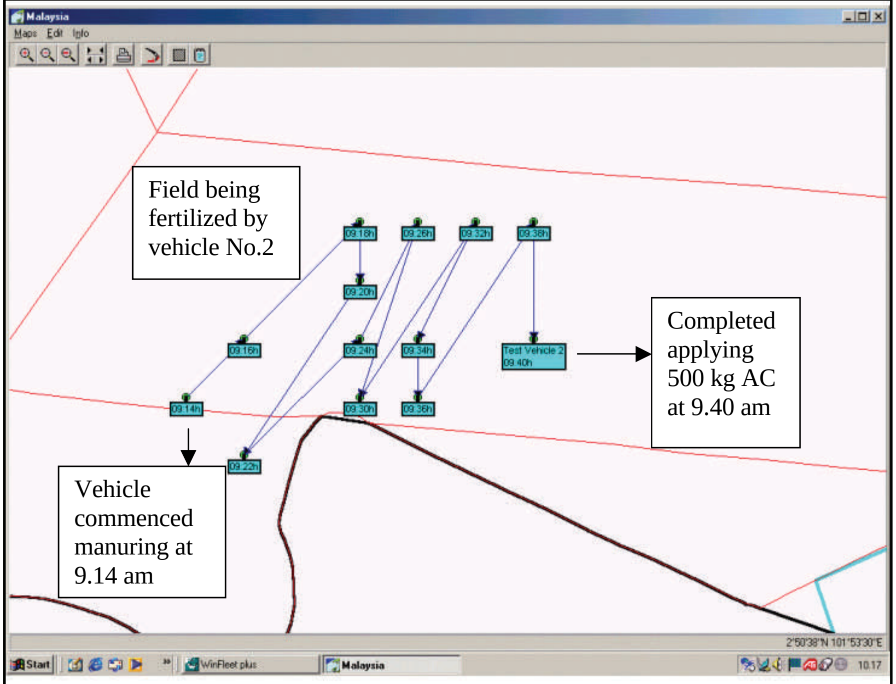

FIGURE 3: VEHICLE POSITIONS DISPLAYED ON THE DIGITAL MAP OF THE ESTATE

The data from the AVTS was exported to MapInfo, a Desktop Geographical Information System (GIS) software, to generate a footprint map of the area covered by the spreader as shown in Figure 4 below:
With this map, it was able to pick up areas that have been manured or missed at a glance. At the same time it was possible to compute the area covered and the average rate of fertilizer applied in the area concerned.

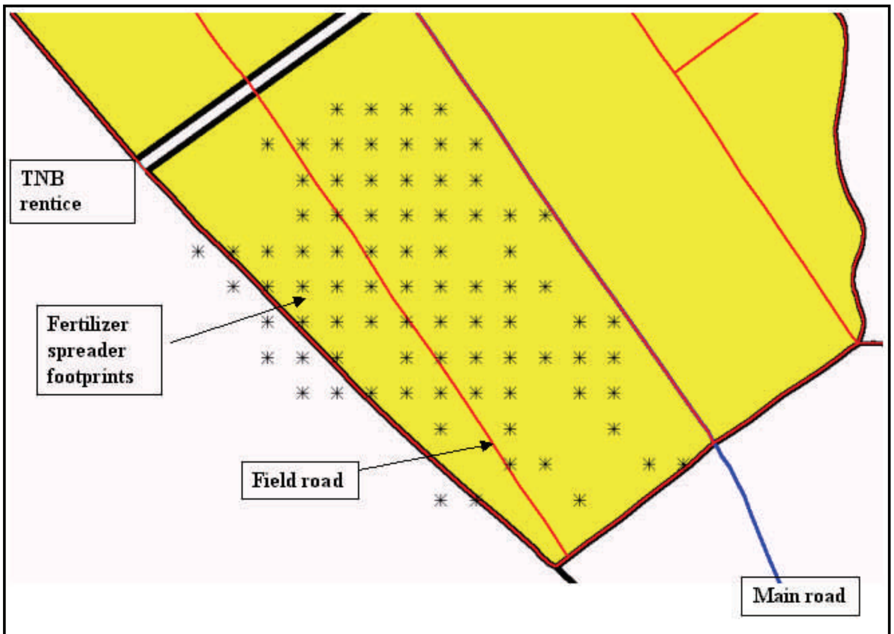

FIGURE 4: A FOOTPRINT MAP OF THE FERTILIZER SPREADER

If real-time monitoring is not critical, the data captured by the MCU could be downloaded to the CMS in the office at the end of the day automatically or manually when the fertilizer spreader returns to the office.

Implications

As fertilizer is the most important input both in terms of cost and its effects on palm growth and yield in most oil palm estates, it is imperative that they are properly applied in terms of rate, placement and timing to achieve the best results. The system under evaluation has the potential of assisting both the Estate Mangers and Agronomists in improving the management of fertilizer use on the estates.

With appropriate modifications, the AVTS could also be used to track and monitor vehicles deployed for other fieldwork such as weeding and transportation of fresh fruit bunches.

2) Automation of yield data acquisition in the field

The rapidly developing information technologies have presented the oil palm industry with numerous new opportunities and possibilities in the field of data handling and data automation (Ng *et al*., 2000 and Hon, 2000). A more efficient way of collecting important field data and transforming them into useful information and knowledge and automation could lighten the workload of the Estate Manager and assist him in making more informed decisions.

One of the most important and frequently gathered data in the oil palm estates is the fresh fruit bunches (ffb). The conventional way of collecting yield data in an oil palm estate is by means of a pen and paper. This is not an efficient way of handling data if they have to be keyed into an electronic device in the office for further processing. With the availability of affordable handheld electronic devices, yield data could now be captured in a digital format in the field and transmitted or downloaded to the office computers for further processing. This would obviate the need for double entry work and minimize errors resulting from manual keying of data.

Handheld digital devices that could be used in oil palm estates for data collection in the field include Personal Digital Assistants (PDAs), smart card readers and barcode readers. Gan *et al.* (2001) reported that PalmPilot, a PDA could be used to record the number of ffb, fruit quality, identity of the field and harvester, and other relevant details in the field. The data captured in the PalmPilot could be downloaded into a customized database in the office desktop computer to generate reports required by the estates.

The possibility of automating the data acquisition in the field with bar codes is worth exploring. By bar-coding the ffb platforms, harvesting tasks and details of the field and harvester, a bar code reader could easily pick up the information for further processing in the office. The bar code system would also require a database of related information to be available as the bar code reader merely reads encoded numbers. This would eliminate errors due to keying-in and provide an added security against false data entry by the recorders. Basically, the bar code reader works on the principle of reading reflected encoded strips on its sensor.

Another promising way of automating and simplifying the yield recording in the field is to weigh the ffb with an automatic weighing device. For example, a hydraulic weighing device attached to the ffb trailer and connected to an on-board computer and printer could weigh the ffb and produce an instant print out of the ffb weight with other relevant details and give it to the harvesters concerned on the spot (Please note that this has yet to be assembled for evaluation). Payment to harvesters based on weight would be simpler and probably more accurate than the conventional method based on bunch count. A picture of a weighing device, which converts the hydraulic pressure required to lift a load of ffb to weight with ± 5 kg accuracy is shown in Figure 5.

Acquisition of yield and other field data in a digital format would obviate the need for double entry of data thus eliminating errors due to key-in. At the same time providing an added security against false data entry by the recorders. The digitally acquired field data could be integrated with appropriate databases to generate reports including check roll required by the interested parties. Automating the production of reports would reduce paper work in the office and free the field personnel to do more work in the field. It could also be transformed into useful information and knowledge to assist the Estate Managers to make more informed decisions.

FIGURE 5: A REMOVABLE ELECTRONIC WEIGHING DEVICE (MOUNTED ON THE DASHBOARD OF THE FFB DUMPER) CONVERTS THE HYDRAULIC PRESSURE REQUIRED TO LIFT THE FFB LOAD TO WEIGHT WITH ± 5 KG ACCURACY

ACKNOWLEDGEMENTS

The authors thank the Directors of Messrs Applied Agricultural Research (AAR) Sdn. Bhd. and their principals Messrs Boustead Holdings Bhd and Kuala Lumpur Kepong Bhd. for permission to present this paper. Thanks are also due to Dr. Soh Aik Chin, Head of Applied Agricultural Research, AAR for his valuable suggestions and encouragement. The inputs of Messrs. CFL Technology (M) Sdn. Bhd., Emdek Sdn. Bhd. and En. Bakri Jamaluddin, Manager, Ladang Kombok are also gratefully acknowleged.

REFERENCES

GAN H. H., HENG Y. C. & GOH, K. J. (2001). An Improved Yield Recording and Reporting System for Oil Palm Estates with Hand-held Organiser. Paper submitted and accepted for poster presentation at PIPOC conference, Kuala Lumpur August 2001.

GOH, K. J.; TEO, C. B.; CHEW, P. S. AND CHIU, S. B. (1999). Fertilizer management in oil palm – Agronomic principles and field practices. ISP Course on Fertilizer Management for Oil Palm Plantations. Incorporated Society of Planters, Sandakan

HON D. (2000). Data Acquisition System Using Palmtop Computers in Plantation Management. Preprint Seminar on "Integrating Computer Technology / Software for Efficient Plantation Management". Incorporated Society of Planters, Shah Alam. 9 August 2000.

NG, H. C. PATRICK; CHEW, P.S.; GOH, K.J.; GAN, H.H. & HENG Y. C. (2000). Planter's Toolbox in the 21st Century. Proc. of International Planters Conference, Plantation Tree Crops in the New Millennium: the Way Ahead. Vol. 1 (Pushparajah, E. ed.). Incorporated Society of Planters, Kuala Lumpur. 717 – 737.

ONG, B. K. (2000). Management practices and cost reduction in oil palm plantations. Preprint National Seminar on Cost Reduction Through New Innovations in the Malaysian Palm Oil Industry. PORIM, Kuala Lumpur.

OOI, L. H. & TEY, S. H. (1998). Applications of Global Positioning System and Geographical Information System in oil palm estates. Preprint National Seminar on Mechanization in Oil Palm Plantations – Towards Improving Productivity Through Mechanization. Palm Oil Research Institute of Malaysia, Kuala Lumpur.

TAN, B.T. (1988). Cost of palm oil production in major producing countries. In Proc. 1987 International Oil Palm Conference – Agriculture, Porim, Kuala Lumpur. Pp 339-354.

TEO, C. B.; CHEW, P. S.; GOH, K. J. AND KEE, K.K. (1998). Optimising return from fertilizer for oil palms: An intergrated agronomic approach. Preprint MOSTA Symposium, Lumut, Perak.

Fully Mechanised Sulphur Dusting to control Oidium SLF

Oidium heveae has been the major cause of secondary leaf fall in mature and immature rubber over the years. This disease leaves behind easily recognizable lesions on the retained leaves - pale yellowish patches which are irregular, large and smooth. It has been found to infect all clones but more severely in PB 235 and PB 217. Clones GT 1 and RRIM 600 can also suffer severe infection when wintering is late or staggered. Protracted refoliation, infrequent showers of short duration, high humidity and low temperatures are factors conducive for outbreak of the disease.

Occurrence of the disease has been more rampant in the last decade due to the lack of control measures and vicious cycles caused by uneven and protracted wintering/ refoliation.

The disease can be effectively controlled with sulphur dusting. Trials conducted by AAR over 4 years showed a mean yield improvement of 8-10% over the control area.

In the 1980s'-1990s, portable knapsack sulphur dusting units were the best available. Output rate was however low at 1-1.5 ha/hour.

In 1999, a tractor-mounted Turbo-spin fertiliser spreader with 300-litre or 650-litre hopper and adapted with a chute and deflectable outlet was successfully used for sulphur dusting. This machine canbe used on hilly terrain by dusting down the slope from access roads. It could throw sun-dried and sieved sulphur to a height of about 20 metres, and a lateral span of 75-80 metres (about 10 tree rows). The machine has achieved a productivity rate of 10 hectares per hour. It can therefore cover about 50 ha per day during the morning hours which are most suitable for dusting. Three rain-free dusting rounds at weekly intervals during the main refoliation has been found to produce satisfactory/good control of the disease. Six estates obtained good success with the machine in 2000

This machine has successfully enhanced the sulphur dusting operation, with significant advantage in speed and coverage and minimal labour requirement and discomfort. All estates with clones susceptible to Oidium are currently using this machine to control the disease.

Ong, T.S.

SOCIAL AND PERSONAL

CONGRATULATIONS !

PROMOTIONS : With effect from 1 January 2001

NAME	DESIGNATION
Mr. Ooi Ling Hoak	PRO
Mr. Quah Yin Thye	SRO
Mr. Tan Cheng Chua	SRO
Miss Gan Huang Huang	ARO II
Miss Vijayakumary Poosari	Res. Clerk I
Puan Siti Norashikin bt. Hj. Moksen	Res. Clerk I
Zurinawati bt. Awang Saad	Res. Clerk II
Puan Norlela bt. Nordin	Res. Clerk III
En. Minin bin Tuboh	Res. Asst. I
En. Mohd. Radzi bin Ariffin	Res. Asst. II
Puan Masitta bt. Ramli	Res. Asst. III

NAME	DESIGNATION
En. Fabli bin Saleh	Res. Asst. III
En. Suzame bin Yusoff	Res. Asst. III
En. Abdul Razak bin Musa	Res. Asst. III
En. Sakari bin Musa	Res. Asst. III
En. Mohd. Fairuz bin Mohamad	Res. Asst. III
En. Mohd. Faizul bin Ibrahim	Res. Asst. III
En. Khamis Ambo Sappe	Res. Asst. III
En. Mazira bin Ashaari	Res. Asst. III
En. Ahmad Zulkarnaen bin Hamdin	Res. Asst. III

Birth :

En. Rustam bin Mamat -birth of his 1st child, Norus Athirah Balqis (daughter) on 7/3/01

WELCOME !

En. Sufairi bin Suhaimi who joined us on 5 February 2001 as Res. Asst. III

Miss Susan Samuel who joined us on 12 March 2001 as Res. Technician (Computer)

SEE, C.M.

Happy Retirement, Tee San !

AARSC ANNUAL DINNER (2000)

No serving table No. 3.
Hope there is enough food for us later

Low cost entertainment. "Plantation Kids on The Block" in the 2000 AARSC Annual Dinner

AWARD PRESENTATIO

AARSC TRIP TO FRASER'S HILL

Participants learned to appreciate team work while enjoying an outdoor game organized at Fraser's Hill Resort

Young and sweet girls of AAR enjoying themselves at Fraser's Hill Resort

A small contribution from Mr. Chan Weng Hoong for us to laugh ? or smile ?

Woman Power

At a grand dinner the Emcee invited ten couples to the stage and facing them, he asked "All you husbands, I want you to be honest with me. "Those of you who are hen-pecked by your wife, please stand to my left and those who are not, please go to my right. Immediately some of the ladies were seen whispering to their husbands.

Emcee: "Come on, please move to my left or right. Five sheepish husbands moved to the left of the Emcee and everybody had a good laugh. The other five moved to the right and every man at the dinner stood up and gave them a standing ovation. The Emcee was impressed and facing the latter five, said to one of them; "I can see who is boss in your family. Can you tell everyone present here the secret of your success?"

The man answered sheepishly, " Our wives whispered to us to move to the right".

"Fantastic"

In the days of Wong Peng Soon and Eddy Choong, badminton fans could only follow Thomas Cup matches from the radio, as television was not available then.

Frankie was an avid badminton fan and was always glued to the radio when the Thomas Cup finals were being played.

He got excited everytime the radio commentator shouted "Great shot! Fantastic!" "Fantastic drop shot!" "Fantastic smash!"

When he got married, he decided to call his son "Fantastic Frank". When he died Fantastic Frank got married. Fantastic Frank did not like his name because his friends always made fun of him. One day he was strickened with terminal cancer. While lying on his death bed, he instructed his wife, "You can write anything on my tombstone but please leave out the work 'Fantastic'. Just write 'Frank' ".

At the tombstone, his wife wrote the following epitaph "Here lies Frank, a great man and a good husband who had eyes only for his wife throughout his life".

At all souls day, all the men who came to the cemetery and who walked past Frank's tombstone whispered to themselves, "Fantastic!!".