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FINAL REPORT OF PESTICIDE APPLICATION TECHNOLOGY WORKSHOP/TRAINING COURSE UNTIL 1998

1. Introduction

Pesticides provide innumerable benefits for the control of various pests which destroy almost a third of food crops. However the misuse of such agents has also resulted in significant concern with possible adverse effects to public health and environment. The usage of pesticides has been steadily increasing over the years, both for the control of pest and diseases for crops as well as vector control for the public health programme. The actual application of pesticides holds the key to the effective control of the pests, diseases and weeds on the one hand and ensurance of safety to the farmer and the environment on the other.

Considerable attention has been paid towards effective application technology resulting in the development of new delivery systems, namely ultra low volume sprayers, controlled release droplet and electrodyne application system besides improvements in the design and efficiency of the conventional spraying systems.

Realising the importance of pesticide technology, the Project Committee Meeting of RENPAP in China 1994 agreed that Malaysia host the Pesticide Application Technology Course/Workshop to be held in September 1995. UNIDO agreed to jointly organise the Course. However due to some unforeseen circumstances the course could only be held in September 1996.

Malaysia proceeded to set up the necessary committee to prepare for the Course. An Organising Committee comprising of members from different agencies was set up. The organising committee was chaired by the nominee from Malaysian Plant Protection Society (Refer Appendix 1). Three meetings were held which discuss the course content, the principal lecture and the lecturers.

The Committee decided that the course content would follow the previous International Pesticide Application Technology Course held in 1993 with minor amendment following the evaluation of the 1993 course by the participants. The content of the course will cover Theory and Practical. Amongst the subjects that will be covered are Effective Pesticide Application, Spray Atomizer, Behavior of Spray Droplets, Hydraulic Sprayers, Hydraulic Nozzles, Calibration of Knapsack Sprayers, Controlled Droplet Application, Spray Droplets, Coverage and Sampling, Spray Technology Option, Calibration of Tractor Mounted Boom Sprayer, Tractor Mounted Mistblower, Fogging Technology, Air Carrier Sprayers and Safety Aspects of Pesticide Application.

A comprehensive workshop/training course programme was then prepared as in the Appendix 2.

The workshop/training course was then officially opened by the Director-General of Agriculture Malaysia on the 23 September 1996 and the workshop/training course was conducted over a period of 6 days.

A Principal Lecturer, Dr. Graham A. Matthew from IPARC, United Kingdom, fully sponsored by UNIDO conducted most of the lectures/practical training during the course. Other lectures/practical training were undertaken by local Pesticides Application Technology experts from Research Centres, University and from Private Companies (Refer Appendix 3).

A total of 35 participants attended the course (Refer Appendix 4). Fourteen participants from member countries of RENPAP were sponsored by RENPAP/UNIDO. The other participants were sponsored by their own organisations from Malaysia.

The course was conducted at the Agriculture Training Institute, Department of Agriculture, Serdang, Selangor. All participants stayed in the centre for the duration of the course. Equipment used for the course are equipment bought through UNIDO from the previous course in 1993 as well as equipment bought from funds from UNIDO for the 1996 course. Some equipment were also be borrowed from the Department of Agriculture, Research Institutions as well as from the Agriculture University of Malaysia.

Major funding for the course came from UNIDO. A total of US\$ 8,000.00 has been promised by UNIDO for the course. The funding will be disbursed over a period of 3 years. Until the end of 1998 a total of US \$7,000 has been received. Cost for internal transport, secretariat facilities, avenue for the course was borne by the Malaysian Government.

Activities in 1997

The committee met to do post mortem on the course and also to discuss the evaluation of the course content by the participants. A number of decision have been made on how to improve future courses. The main decisions made were:

- i) to give more emphasis on field study/practical;
- ii) to ensure that only genuine trainers are chosen as participants;
- iii) to buy enough equipment for future courses; and
- iv) to review the course schedule to give more opportunity to see the country

Activities in 1998

The committee met once in 1998 and agreed to purchase equipment in anticipation for the next workshop/training course. Quotations has been asked from companies to get reasonable prices for the equipment. A list of equipment will be prepared and will be presented to the organising committee for approval. The treasurer ensured the committee that a sum of US \$2000.00 could be used for the purchase.

RENAP has been organising various workshop/training programmes to provide a platform for exchanging views and providing training on various aspects related to safe handling production use and disposal of pesticides in its network countries. This workshop/training course has one way or another acheived its aim in strengthening the capabilities of the participants from member countries engaged in the field of pesticide application technology as the majority of the participants has found the workshop/training course to be very useful.

ORGANISING COMMITTEE

Chairman: Dr. Mohd. Jusoh Mamat

Secretary: Ms. Shamsiah Muhammad

Committee Members:

Dr. Dzolkhifli Omar
Dr. Mohd. Matthieu Abdullah
Ms. Nursiah Mohd Tajol Aros
Mr. Faizal Wong Abdullah
Ms. Lee Kheng Hwa

**2nd INTERNATIONAL COURSE
ON
PESTICIDE APPLICATION TECHNOLOGY**

23 - 28 SEPTEMBER 1996

**at
Agricultural Extension Training Institute
Department of Agriculture
Serdang, Selangor
Malaysia**

PROGRAMME

Sunday, 22 September 1996

Arrival and Registration of Participants

DAY 1

Monday , 23 September, 1996

0830 - 0930	Opening Ceremony
0930 - 1000	Tea
1000 - 1300	Presentation of Country Report Session 1 <i>Dr. Mohd. Jusoh Mamat</i>
1300 - 1400	Lunch
1400 - 1615	Presentation of Country Report Session 2 <i>Dr. Mohd. Jusoh Mamat</i>
1615 - 1630	Tea
1630 - 1730	Discussion and Summary <i>Dr. Mohd. Jusoh Mamat</i>
1900	Dinner
2000 - 2100	Introduction to Course and Benchmark Test <i>Dr. Mohd. Jusoh Mamat</i>

DAY 2	Tuesday , 24 September 1996
0800 - 0900	Effective Pesticide Application <i>Prof. Graham A. Matthews</i>
0900 - 1000	Spray Atomizer <i>Prof. Graham A. Matthews</i>
1000 - 1020	Tea
1020 - 1100	Behaviour of Spray Droplets <i>Dr. Dzolkhifli Omar</i>
1100 - 1200	Hydraulic Sprayers - compression sprayer - Knapsack Sprayer <i>Prof. Graham A. Matthews</i>
1200 - 1300	Hydraulic Sprayers - motorised knapsack sprayer - tractor mounted boom sprayer <i>Prof. Graham A. Matthews</i>
1300 - 1400	Lunch
1400 - 1500	Hydraulic Nozzles <i>Prof. Graham A. Matthews</i>
1500 - 1730 (P)	Calibration of Knapsack Sprayer <i>Prof. Graham A. Matthews</i> <i>Dr. Mohd. Matthieu Abdullah</i>
1730	Tea
1900	Dinner
2030 - 2130	Video on Pesticide Application <i>Mr. Faizal Wong Abdullah</i>

DAY 3**Wednesday, 25 September 1996**

0800 - 0900	Controlled Droplet Application <i>Prof. Graham A. Matthews</i>
0900 - 1040 (T&P)	Spray Droplets, Coverage and Sampling <i>Dr. Dzolkhifli Omar</i> <i>Dr. Mohd Matthieu Abdullah</i>
1040 - 1100	Tea
1100 - 1200	Spray Technology Options in Weed Control <i>Prof. Graham A. Matthews</i>
1200 - 1300	Air Carrier Sprayers <i>Prof. Graham A. Matthews</i>
1300 - 1400	Lunch
1400 - 1530 (P)	Calibration of Tractor Mounted Boom Sprayer <i>Prof. Graham A. Matthews</i> <i>Dr. Mohd. Matthieu Abdullah</i>
1530 - 1730 (P)	Tractor Mounted Mistblower <i>Prof. Graham A. Matthews</i> <i>Dr. Mohd. Matthieu Abdullah</i>
1730	Tea
2000 - 2200	Course Dinner

DAY 4

Thursday, 26 September 1996

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VISIT

TO

SPRAYER

MANUFACTURER

JUN CHONG

KLUANG, JOHOR

Dr Mohd. Jusof Mamat:

Dr. Mohd. Matthieu Abdullah:

1800

Dinner in Melaka

DAY 5**Friday 27, September 1996**

0800 - 0900	Fogging Technology <i>Dr. Dzolkhilfi Omar</i>
0900 - 1000(P)	Fogging Equipment and Demonstration <i>Dr. Dzolkhilfi Omar</i> <i>Dr. Mohd. Matthieu Abdullah</i>
1000 - 1020	Tea
1020 - 1130 (T&P)	Controlled Droplet Application Spraying on weeds <i>Mr. Chung Gait Fee</i>
1130 - 1230(P)	Maintenance of Sprayers <i>Mr. Yang Yew Min</i>
1230 - 1430	Lunch
1430 - 1630 (P)	Spray Coverage and Calibration of Portable Mistblower <i>Mr. Yang Yew Min</i> <i>Dr. Mohd Matthieu Abdullah</i>
1630-1730 (P)	CDA Spraying on Crops <i>Prof. Graham A. Matthews</i> <i>Dr. Mohd. Matthieu Abdullah</i>
1730	Tea
1900	Dinner
2000 - 2100(P)	Examination of Spray Deposition - Flourescent Tracers <i>Dr. Mohd. Matthieu Abdullah</i>

DAY 6**Saturday, 28 September 1996**

0800 - 0900	Safety Aspects of Pesticide Application <i>Dr. Mohd Jusoh Mamat</i>
0900 - 1030 (P)	Demonstration on Safety Aspects of Pesticide Application <i>Dr. Mohd. Jusoh Mamat</i>
1030 - 1100	Tea
1100 - 1235	Course Evaluation and Discussion <i>Prof. Graham A. Matthews</i> <i>Dr. Mohd. Jusoh Mamat</i>
1230 - 1300	Closing Ceremony
1330 - 1430	Lunch

(P) Practical
(T&P) Theory and Practical

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