Annual report for the period July 1988- June 1989

Project No. 15-004

Our project is drawing to a close and the final report will be written following October 1989. Therefore, the present report will only summarize the findings of the last year.

Israel

We continued with the rearing programs for natural enemies,. After we found out in the past that the most efficient parasitization is achieved with intermediate numbers of whiteflies per leaf, ie. with about 50-100, and not with over 300 per leaf as often occurs, we set out to determine the numbers of parasitoids that should be released in order to obtain good parasitism, and the length of time these should be kept on the same plants.

The results were different for Encarsia and for Eretmocerus In the first,we found that the parasitic females apparently do not like being, on the average, more than 4-5 individuals per leaf, and the number of eggs per female diminished rapidly from about 10 per day to about 3 or less when we added more than 40 females per 4 infested leaves. Eretmocerus on the other hand held steady parasitism of some 20-30 progeny per female even when the number of females per leaf was tripled. This has direct implications on rearing ability and explains, in part, also the scattered distribution of the insects in Nature.

Host replacement proved to be an important tool that one might use. parasitism improved greatly when the plants were changed every 2-3 days. This was the case regardless of the numbers of available suitable hosts on the leaves. The reason for this phenomenon is probably that the ovipositing female leaves odors on the plant; these hamper her future host examination and

oviposition practice, so that the number of eggs laid on the same plant in the following days diminishes. Furnishing the parasites with about 3 changes of plants during their 10-12 day maximal oviposition period can improve parasitoid production.

Malawi

So far we have not heard from our partners in Malawi since the last report. Enclosed is a letter on that subject. We hope to get their response in time for the final report.

TELAVIV UNIVERSITY אוניברסיטת תל-אביב
GEORGE S WISE FACULTY הפקולטה למדעי החיים
OF LIFE SCIENCES ע"ש ג'ורג' ס. ויז
DEPARTMENT OF ZOOLOGY המחלקה לזואולוגיה

11 June 1989

Dr. Greenwell Nyirenda
Deputy Chief Agricultural Research Officer
Makoka Research Station
Private Bag 3
Thondwe
MALAWI

Dear Greenwell

This time it is my turn to be concerned. I have not heard from you for a long time and have not as yet received your report. Since AID absolutely required a detailed report, and since in our joint travels in Malawi I saw the many experiments and trials that you had going on, I urge you to put all of these together, get the material also of Munthali's excellent studies, and send them to me very soon. I will write to the AID that our report is being delayed somewhat, but it must be clear that we have to file it. Moreover, it would be a shame not to do so because we have done much work and you have a lot of results that should be published. Since the AID people are the ones who financed this work, they should also get the full reports as required.

As you know, I will not be able to attend the Nairobi meetings. I hope that one of you will be able to go and report our findings. If so, please look up my colleage, Prof. David Wool, who is working with me on strain differences in B. tabaci.

I hope that you have recieved the funds that were sent from here earlier this year.

With best personal regards, also to your wife.

Yours sincerely

Ian Gerling
Professor of Entomology

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