TABLE OF CONTENTS

Page

i
ii
iv
1
3
4
20
25
46
47
54

LIST OF TABLES

Table

1	The effect of food type on the body length of	
	Sitophilus zeamais adult	16
2	The schedule for addition of equal number	
	of Anisopteromalus calandrae and for	
	Sitophilus zeamais sampling	23
3	Analysis of variance of effect of parasitoid density	
	on the percentage of maize weevil emergence, the percentage	
	of parasitoid emergence and the percentage of PIM in the short	
	term experiment	27
4	Effect of parasitoid density on the percentage of parasitoid	
	emergence, the percentage of maize weevil emergence and	
	the percentage of PIM in the short term experiment	27
5	Analysis of variance of effect of parasitoid density on the	
	progeny sex ratio in the short term experiment	28
6	Effect of parasitoid density on the sex ratio (female: male)	
-	in the short term experiment	28
7	Analysis of variance of effect of parasitoid density and time	
	after parasitoid introduction on the number and percentage of	
	maize weevil emergence	30
8	Effect of parasitoid density on the percentage of parasitoid	
Ũ	emergence and the percentage of maize weevil emergence	
	at the end of the first month after releasing parasitoid	30
9	Effect of parasitoid density on the percentage of parasitoid	20
-	emergence and the percentage of maize weevil emergence	
	at the end of the second month after releasing parasitoid	31
10	Effect of parasitoid density on the percentage of parasitoid	51
10	emergence and the percentage of maize weevil emergence	
	at the end of the third month after releasing parasitoid	31
11	Effect of parasitoid density on the percentage of parasitoid	51
11	emergence and the percentage of maize weevil emergence	
	at the end of the fourth month after releasing parasitoid	32
12	Effect of parasitoid density on the percentage of parasitoid	52
12	emergence and the percentage of maize weevil emergence	
	at the end of the fifth month after releasing parasitoid	32
13	Effect of parasitoid density on the percentage of parasitoid	52
15	emergence and the percentage of maize weevil emergence at	
	the end of the sixth month after releasing parasitoid	33
14	61	55
14	Analysis of variance of effect of parasitoid density and time after parasitoid introduction on the percentage of	
	after parasitoid introduction on the percentage of	27
	parasitoid emergence	37

Page

LIST OF TABLES (continued)

Table		Page
15	Analysis of variance for effect of parasitoid density	
	and time after parasitoid introduction on the parasitoid	
	sex ratio (female: male) in the long term experiment	42
16	Effect of parasitoid density on the progeny sex ratio	
	(female: male) in the long term experiment	43
Append	dix Table	
1	Effect of parasitoid density on the number of maize	
1	weevil emergence	55

LIST OF FIGURES

Figure

Page

1	Life stage of Anisopteromalus calandrae	7
2	Anisopteromalus calandrae, (A) male and (B) female	9
3	Anisopteromalus calandrae feeding on its	
	host <i>Sitophilus zeamais</i>	10
4	Sitophilus spp., (A) rice weevil, Sitophilus oryzae	
	and (B) maize weevil, Sitophilus zeamais	12
5	Identification of Sitophilus spp.	13
6	Genitalia of maize weevils	14
7	Snout of maize weevils	15
8	Life stage of maize weevil, Sitophilus zeamais	17
9	Preparation of newly emerged parasitoid	21
10	Four cheesecloth bags filled with infested milled rice in	
	clear plastic boxes, (A) top view, (B) side view	22
11	Bottles containing rice grain infested with weevils	
	and their parasitoids in the long term experiment	23
12	The average number of maize weevil emergence as	
	a function of time after parasitoid release $(n=5)$.	34
13	The percentage of maize weevil emergence among	
	five parasitoid densities as a function of time after	
	parasitoid introduction	36
14	The percentage of parasitoid emergence among six	
	months after releasing parasitoid as a function of	
	parasitoid densities	38
15	The percentage of parasitoid emergence among five	
	parasitoid densities as a function of time after	
	parasitoid introduction	40

Appendix Figure

1	The mean number of Anisopteromalus calandrae emergence	
	in each treatment as a function of duration after	
	parasitoid introduction	56

v