

TABLE OF CONTENTS

TITTLE	i
APPROVAL SHEET	iii
STATEMENT	v
ABSTRAK	vi
BIOGRAPHY	viii
PREFACE	ix
TABLE OF CONTENTS	xi
LIST OF FIGURES	xiii
LIST OF TABLES	xiv
CHAPTER I INTRODUCTION	1
A. Background	1
B. Problem Statement	3
C. Research Aim	4
D. Significance	4
CHAPTER II LITERATUREE REVIEW	5
A. Arthropods Diversity	5
B. Effects of Farming Systems on Arthropods Diversity.....	8
C. Pests in Rice Crops.....	12
D. Natural Enemies of Rice Pest.....	14
E. Arthropods Sampling Methods	18
F. Framework of Thoughts	21
G. Hypothesis.....	24
CHAPTER III RESEARCH METHODS	25
A. Place and Time Research.....	25
B. Materials and Tools	25
C. Research Method.....	26

D. Research Implementation.....	27
E. Observation Parameter	32
F. Data Analysis.....	34
CHAPTER IV RESULTS AND DISCUSSION	37
A. Number of Arthropods and Their Genera.....	37
B. Analysis of the Diversity Index, Evenness Index, and Dominance Index of Arthropods.....	43
C. Ecological Roles Based on Community Structure	46
CHAPTER V CONCLUSIONS AND RECOMMENDATIONS	57
A. Conclusions	57
B. Recommendation.....	57
BIBLIOGRAPHY	59
APPENDIX	76

LIST OF FIGURES

Figure 2. 1 <i>Scirpophaga innotata</i> Walker	12
Figure 2. 2 <i>Leptocorisa acuta</i> Thunberg	13
Figure 2. 3 <i>Nilaparvata lugens</i> Stal	14
Figure 2. 4 <i>Agriocnemis femina</i> Brauer	15
Figure 2. 5 <i>Lycosa pseudoannulata</i> Boes.....	16
Figure 2. 6 <i>Ophionea nigrofasciata</i> Schmidt Goebel	16
Figure 2. 7 <i>Tetrastichus schoenobii</i> Ferriere.....	17
Figure 2. 8 <i>Gonatocerus triguttatus</i> Girault.....	18
Figure 2. 9 Yellow Sticky Trap.....	19
Figure 2. 10 Sweepnet.....	20
Figure 3.1 Research Field for Rice Cultivation Systems	26
Figure 3. 2 Layout of yellow sticky traps	29
Figure 3. 3 Yellow Sticky Trap.....	29
Figure 3. 4 Sweepnet Tools.....	30
Figure 4. 1 Role of Arthropods in Three Rice Cultivation Systems	46

LIST OF TABLES

Table 4. 1 Number of Arthropods in Three Rice Cultivation Systems in Sawangan Subdistrict	37
Table 4. 2 Result of Calculation of the Diversity Index (H'), Evenness Index (E), and Dominance Index (D) of Arthropods	43
Table 4. 3 Data on Arthropod Genera That Act as Pests and Natural Enemies in Introduced organic cultivation system	49
Table 4. 4 Genus Composition of Arthropods as Pests and Natural Enemies in Local organic cultivation system	52
Table 4. 5 Composition of Arthropod Genera as Pests and Natural Enemies in Conventional Cultivation System	54