

TABLE OF CONTENTS

COVER	i
ENDORSEMENT PAGE	iii
STATEMENT	iv
ABSTRACT	v
BIOGRAPHY	vi
PREFACE	vii
TABLE OF CONTENTS	viii
LIST OF TABLES	x
LIST OF FIGURES	xii
LIST OF GRAPHS	xiii
LIST OF APPENDIXES	xiv
CHAPTER I INTRODUCTION	1
A. Background	1
B. Problem Statements	3
C. The Objective of The Research	3
D. Benefits of The Research	3
CHAPTER II LITERATURE STUDY	4
A. <i>Diaphorina citri</i> Kuwayama	4
B. Citrus Vein Phloem Degeneration (CVPD)	6
C. Mugwort (<i>Artemisia vulgaris</i>)	9
D. Kaolin	12
E. Plant Volatile	14
F. Conceptual Framework	16
G. Hypotesis	18
CHAPTER III RESEARCH METHOD	19
A. Place and Time of Research	19
B. Materials and Tools	19
C. Research implementations	20
D. Observation parameter	25
E. Data Analysis	27

CHAPTER IV RESULT ANALYSIS	28
A. Non-choice test.....	28
B. Choice test	41
C. Persistence test	42
D. Effect of treatments of the growth of citrus plants	43
CHAPTER V DISCUSSION	45
A. Non-choice test.....	45
B. Choice test	45
C. Persistence test	46
D. Effect of treatments of the growth of citrus plants	47
CHAPTER VI CONCLUSIONS AND SUGGESTIONS	48
A. Conclusions	48
B. Suggestions.....	48
REFERENCES	49
APPENDIX.....	54

LIST OF TABLES

3.1 Concentrations tested on non-choice test.....	20
4.1 The average number of <i>D. citri</i> stayed at psyllid cup, treatment cup, outside cups and died during on preliminary non-choice test	28
4.2 The average number of <i>D. citri</i> on the psyllid cup, inside of treatment cup, outside cups and died during the test, treatment <i>A. vulgaris</i> 0.5%	29
4.3 The average number of <i>D. citri</i> on the psyllid cup, inside of treatment cup, outside cups and died during the test, treatment <i>A. vulgaris</i> 1%	30
4.4 The average number of <i>D. citri</i> on the psyllid cup, inside of treatment cup, outside cups and died during the test, treatment <i>A. vulgaris</i> 2%	31
4.5 The average number of <i>D. citri</i> on the psyllid cup, inside of treatment cup, outside cups and died during the test, treatment Kaolin 1.5%	32
4.6 The average number of <i>D. citri</i> on the psyllid cup, inside of treatment cup, outside cups and died during the test, treatment Kaolin 3%	33
4.7 The average number of <i>D. citri</i> on the psyllid cup, inside of treatment cup, outside cups and died during the test, treatment Kaolin 5%	34
4.8 The average number of <i>D. citri</i> on the psyllid cup, inside of treatment cup, outside cups and died during the test, treatment <i>A. vulgaris</i> 0.5% + Kaolin 5% ..	35
4.9 The average number of <i>D. citri</i> on the psyllid cup, inside of treatment cup, outside cups and died during the test, treatment <i>A. vulgaris</i> 1% + Kaolin 5%	36
4.10 The average number of <i>D. citri</i> on the psyllid cup, inside of treatment cup, outside cups and died during the test, treatment <i>A. vulgaris</i> 0.5% + Kaolin 5% ..	37
4.11 The average number of <i>D. citri</i> stayed at psyllid cup, inside of treatment cup, outside cups and died during non-choice test (all treatments), observed at 12 hours after treatment	38
4.12 The average of the index of repellency (IR) after 12 hours observation	39

4.13 The average number of <i>D. citri</i> that moved to the citrus twigs arm, moved to blank air arm, and not moved during test.....	41
4.14 The average number of <i>D. citri</i> that moved to the treated arm (<i>A. vulgaris</i> 1%), moved to untreated arm, and not moved during test.....	42
4.15 The average number of <i>D. citri</i> that moved to the treated arm (<i>A. vulgaris</i> 1%), moved to untreated arm, and not moved during test (Persistence test).....	43
4.16 The average increase in citrus twigs growth after being treated with <i>A. vulgaris</i> 1%	44

LIST OF FIGURES

2.1 The adult <i>D. citri</i>	6
2.2 <i>A. vulgaris</i> plant	12
2.3 Kaolin.....	14
3.1 Design of non-choice test.....	23
3.2 Design of choice test	25

LIST OF GRAPHS

4.1 The number of <i>D. citri</i> that inside psyllid cups.....	39
4.2 The number of <i>D. citri</i> that inside treatment cups	40
4.3 The number of <i>D. citri</i> that outside the cups.....	40

LIST OF APPENDIXES

1. Non-choice test.....	55
2. Choice test Y-tube.....	56
3. Certificate of <i>Artemisia Vulgaris</i> essential oil	57
4. Certificate of Kaolin.....	58
5. Analysis result of non-choice test	59
6. Analysis result of choice test	144
7. Persistence test	148
8. Effect of treatment of the growth of citrus plants	152
9. Documentations.....	154