

TABLE OF CONTENTS

BACHELOR THESIS	i
ACCEPTANCE LETTER	ii
STATEMENT OF ORIGINALITY	iii
ACKNOWLEDGMENT	iv
TABLE OF CONTENTS.....	v
LIST OF ABBREVIATIONS.....	viii
LIST OF TABLES.....	ix
LIST OF FIGURES	x
ABSTRACT.....	xi
INTISARI	xii
 I. INTRODUCTION	 1
1.1 Background.....	1
1.2 Research objectives	2
1.3 The Expected Benefit from the Research	3
1.4 Hypothesis	3
 II. LITERATURE REVIEW	 4
2.1 Sewage Sludge.....	4
2.2 Composted Sewage Sludge	5
2.3 Liquid Centrate	6
2.4 Heavy Metal	8
2.4.1 Zinc (Zn).....	9
2.4.2 Lead (Pb)	10
2.4.3 Nickel (Ni).....	11
2.4.4 Arsenic (As).....	11

2.4.5	Copper (Cu)	12
2.4.6	Cadmium (Cd)	12
2.4.7	Chromium (Cr)	13
2.5	Soil Mineral Element	14
2.6	Corn (<i>Zea mays</i> L., Gold Dent KD106 Cantal)	14
2.7	Research Framework	16
III.	MATERIALS AND METHODS	17
3.1	Period and Location	17
3.2	Materials and Equipment	18
3.3	Experimental Design	18
3.4	Sampling and Laboratory Analysis	21
3.4.1	Soil Sampling and Analysis	21
3.4.2	Plant Sampling and Analysis	22
3.5	Statistical Analysis	22
IV.	RESULTS AND DISCUSSION	24
4.1	Result	24
4.1.1	Soil Properties in Corn Soil	24
4.1.2	Macronutrient Content in Soil	25
4.1.3	Micronutrient and Mineral Elements in Soil	26
4.1.4	Heavy Metals Accumulation in Soil	28
4.1.5	Corn Yield and Mineral Contents	31
4.1.6	Heavy Metals and Mineral Content in Corn Grain	32
4.2	Discussion	33
V.	CONCLUSION AND SUGGESTION	38
5.1	Conclusion	38
5.2	Recommendation	38

REFERENCES	39
SUPPLEMENTARY PART	51
ATTACHMENT	53