

**EFFECT OF PAIRED ROW PLANTING OF RADISH
(*Raphanus sativus* L.) INTERCROPPED WITH
VEGETABLE AMARANTHUS (*Amaranthus tricolor* L.) IN
SANDY REGOSOL**



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ABSTRACT

This study was carried out at the Agronomy farm, Eastern University, Sri Lanka to evaluate the effect of paired row planting of radish (*Raphanus sativus* L.) intercropped with vegetable amaranthus (*Amaranthus tricolor* L.) in sandy regosol. It was designed in Randomized Complete Block Design with six treatment and four replicates. Treatments were 20/50 cm paired row planting of radish with three or four rows of vegetable amaranthus in between paired rows of radish and 25/40 cm paired row planting of radish with two or three rows of vegetable amaranthus in between paired rows of radish. Base crop and intercrop were also grown in pure stands. In radish planted as base crop, tuberous root (edible portion of root) diameter, length of tuberous root and total root, fresh and dry weight of leaf and tuberous root and other parameters were recorded at regular intervals or at harvest while in vegetable amaranthus, leaf number, root length, shoot height and leaf area index were measured. In addition, land equivalent ratio (LER) as an index of intercropping advantage and economic net income was determined to assess the efficiency of paired row system in comparison to monocropping.

The results showed that there was no significant difference ($P>0.05$) in radish yield among the treatments, however, the yield of radish (39.26 tons/ha) in the monocropping was slightly higher as compared to that in intercropping. Land equivalent ratio was superior in all tested intercropping system compared to monocropping. In economic point of view, 20/50 cm paired row planting of radish with four rows of vegetable amaranthus in between paired rows of radish gave higher returns, however radish yield was low (34.81 tons/ha) as compared to that in intercropping. In 20/50 cm paired row planting of radish with three rows of amaranthus in between paired rows of radish, base

CONTENTS

	Page no
Acknowledgement	I
Abstract	II
Contents	IV
List of Figures	VIII
List of Table	IX
CHAPTER 1	01
1.0 Introduction	01
1.1 Objective	05
CHAPTER 2	06
2.0 Review of literature	06
2.1 Root and tuber crop	06
2.2 Radish	06
2.2.1 Scientific classification	07
2.2.2 Origin and Distribution	07
2.2.3 Cultivated areas in Sri Lanka	07
2.2.4 Extend and Production in Sri Lanka	07
2.2.5 Botanical description	08
2.2.6 Nutritional contents per 100g of radish	09
2.2.7 Uses	10
2.2.8 Growth pattern	11

2.3 Leafy vegetable	12
2.3.1 Amaranthus	12
2.3.2 Origin and Distribution	13
2.3.3 Cultivated areas in Srilanka	13
2.3.4 Extend and Production	13
2.3.5 Scientific classification	14
2.3.6 Botanical description	14
2.3.7 Nutritional composition of vegetable amaranthus	14
2.3.8 Uses	15
2.4 Cropping system	15
2.5 Intercropping	17
2.5.1 Spatial Arrangement	17
2.5.2 Plant Density	18
2.5.3 Maturity	18
2.6 Advantages of paired row planting	19
2.7 Efficient use of basic resources	19
2.8 Pest and disease control	20
2.9 Plant population effect	20
2.10 Planting pattern	21
2.11 Compatible crops	22
2.12 Integrated nutrient management	24
2.13 Leaf area index	24
2.14 Bio mass	25
2.15 Land equivalent ratio	25

CHAPTER 3	26
3.0 Materials and methods	26
3.1 Location	26
3.2 Soil	26
3.3 Previous crop	26
3.4 Experimental design	26
3.4.1 Treatments used in this experiment	28
3.4.2 Variety of crops	31
3.5 Agronomic practices	31
3.5.1 Land preparation	31
3.5.2 Planting of Radish and Amaranthus	31
3.5.3 Fertilizer application	32
3.5.4 Irrigation	32
3.5.5 Pest and disease	32
3.5.6 Weed control	32
3.6 Parameters	33
3.6.1 Radish	33
3.6.1.1 Leaf area	33
3.6.1.2 Radish at harvest	33
3.6.1.3 Dry weight	33
3.6.2 Vegetable amaranthus	33
3.6.2.1 Leaf area	33
3.6.2.2 Vegetable amaranthus at harvest	33
3.7 Statistical analysis	34

CHAPTER 4	35
4.0 Results and discussion	35
4.1 Radish as base crop	35
4.11 Leaf area	35
4.12 Leaf area index	37
4.13 Root formation	38
4.14 Fresh weight of plant	40
4.15 Dry weight of plant	41
4.2 Vegetable amaranthus as intercrop	42
4.21 Leaf area	42
4.22 Leaf area index	43
4.23 Plant growth	44
4.24 Fresh weight	46
4.25 Dry weight	48
4.3 Yield per plot (kg)	49
4.4 Land equivalent ratio	50
4.5 Cost profit for the radish- vegetable amaranthus intercropping	51
CHAPTER 5	53
5.0 Conclusion	53
References	54
Appendices	