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The Efficiency of Rabbit Urine as an Ecological friendly Bio-pesticide for Controlling Pest of Ethiopian Mustard (*Brassica carinata*)

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Introduction

- Human Population is increasing globally, “
- Climate is changing and challenging vegetable production like Ethiopian mustard (EM)
- Pest and diseases are also a problem

Intro…

- EM is known to be drought resistant compared to other vegetables
- And is used by communities across East Africa.
- EM is also challenged by pests and diseases
- There is need for improving vegetable production through ecofriendly means.
- Rabbit urine has rarely been used as a bio-pesticide…

Factors affecting rabbit urine perfomance

Rabbit urine concentration

Pest control

Time

- **Pest species**
- **No. of infected plants**

Study design and data collection

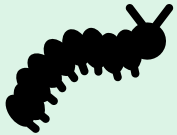
Randomized complete block design (RCBD)

B1	B2	B3
0	25	100
25	75	0
50	100	75
75	50	25
100	0	50

Data collected

Infection status

- *No. of Infected plants.*
- *Not infected*



- *Available pest*
- *Spots in leaves*
- *Mildew*

In three days interval

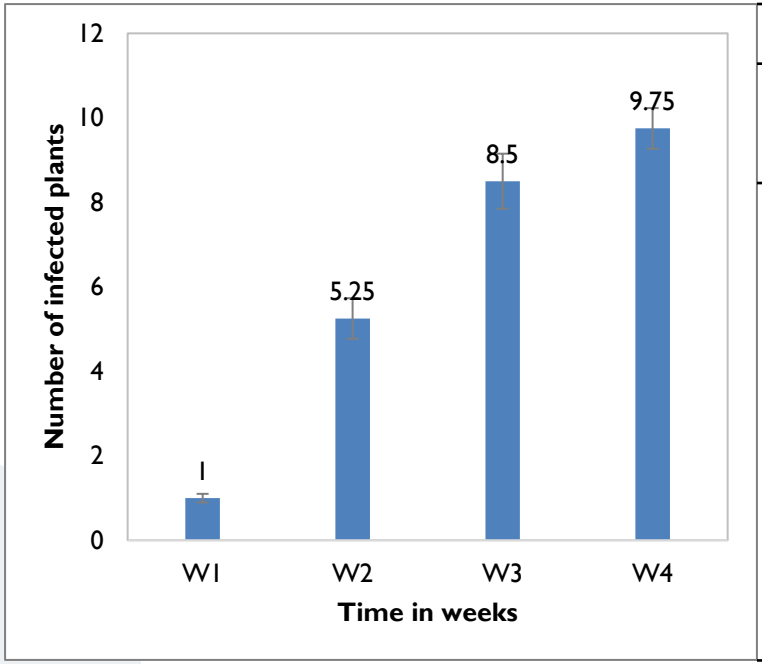
Across 4 weeks

Statistical test; Mann-Whitney u test, Kruskal Wallis (Infection rate across Cons. & T. interval)

Result

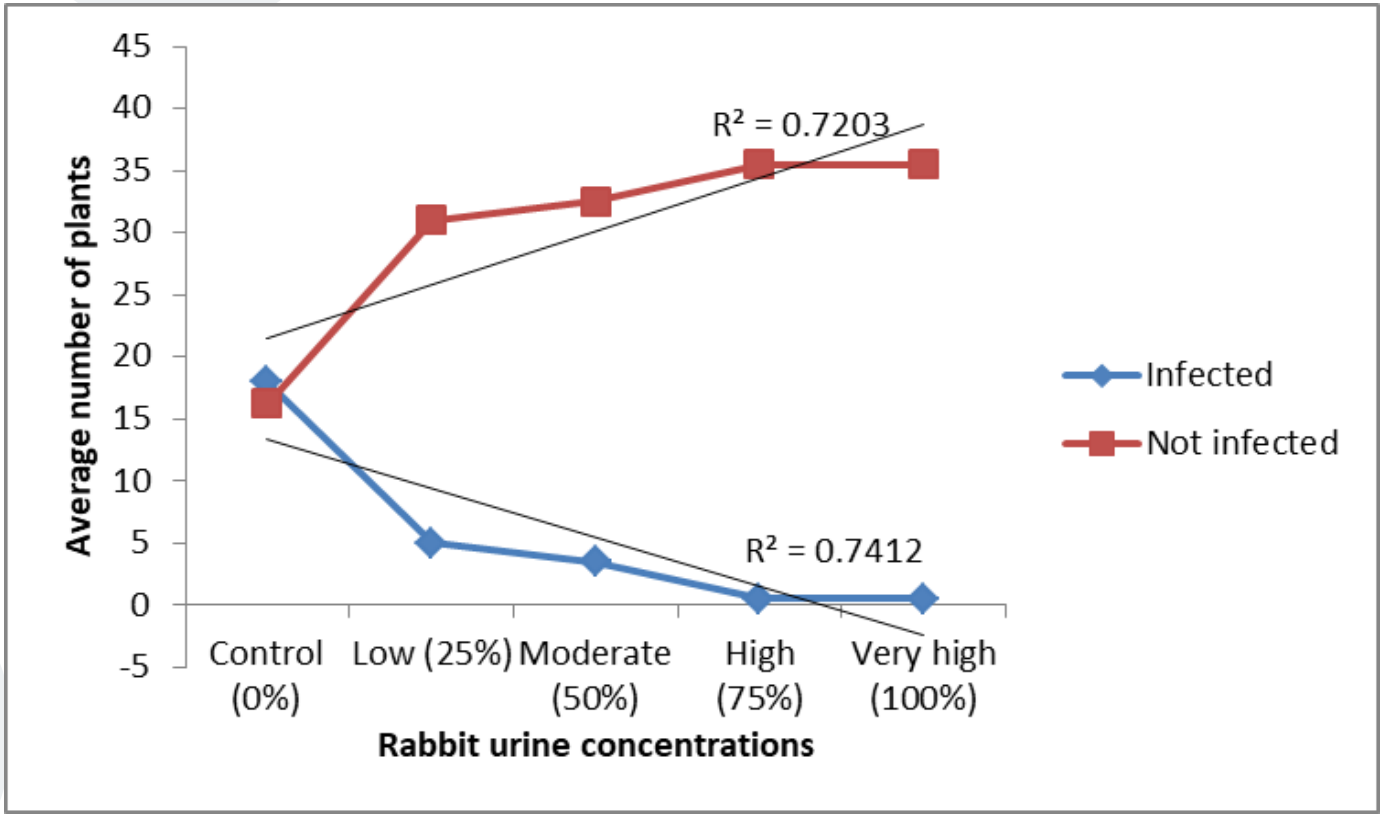
	Common Pest Species Observed	
1	Aphid species (*Brevicoryne brassicae)*	
2	Homopteran larvae (*Nephotettix nigropictus)*	
3	*Diptera syrphidae*	

The average number of infected plants and across different urine concentration in 4 wks.



Time	Infection Status	Concentrations Levels				P-Value
		Low	Moderate	High	Very High	
Week 1	Yes	1	1	1	1	0.02
	No	17	21	26	15	
Week 2	Yes	6	4	5	6	0.01
	No	21	23	22	21	
Week 3	Yes	10	8	7	9	0.02
	No	17	19	20	18	
Week 4	Yes	11	10	9	9	0.01
	No	16	17	18	18	

Plant status across different urine concentrations



Conclusion and Recommendation

- Across treatments, 75% performed best.
- A 100% concentration of urine found to be infective but destructive.
- Infection rate of plants increased with the time of maturity.
- Further studies on the potentials of Rabbit in agriculture are needed

Thanks!

ANY QUESTIONS?

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