

# Ecological project



## Phytoncides' effect on the growth of *Pseudomonas fluorescens* and *Pseudomonas putida*

Proekt

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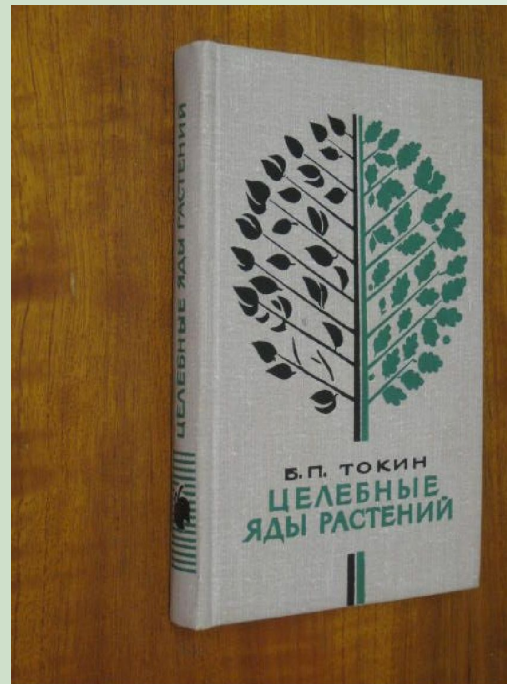
Teacher: Esina V.A.

# Phytonci

Phytoncides – the flying organic connections allocated by plants, possess big antimicrobial activity since are a component of immunity of plants to influences of viruses and bacteria.



# Information















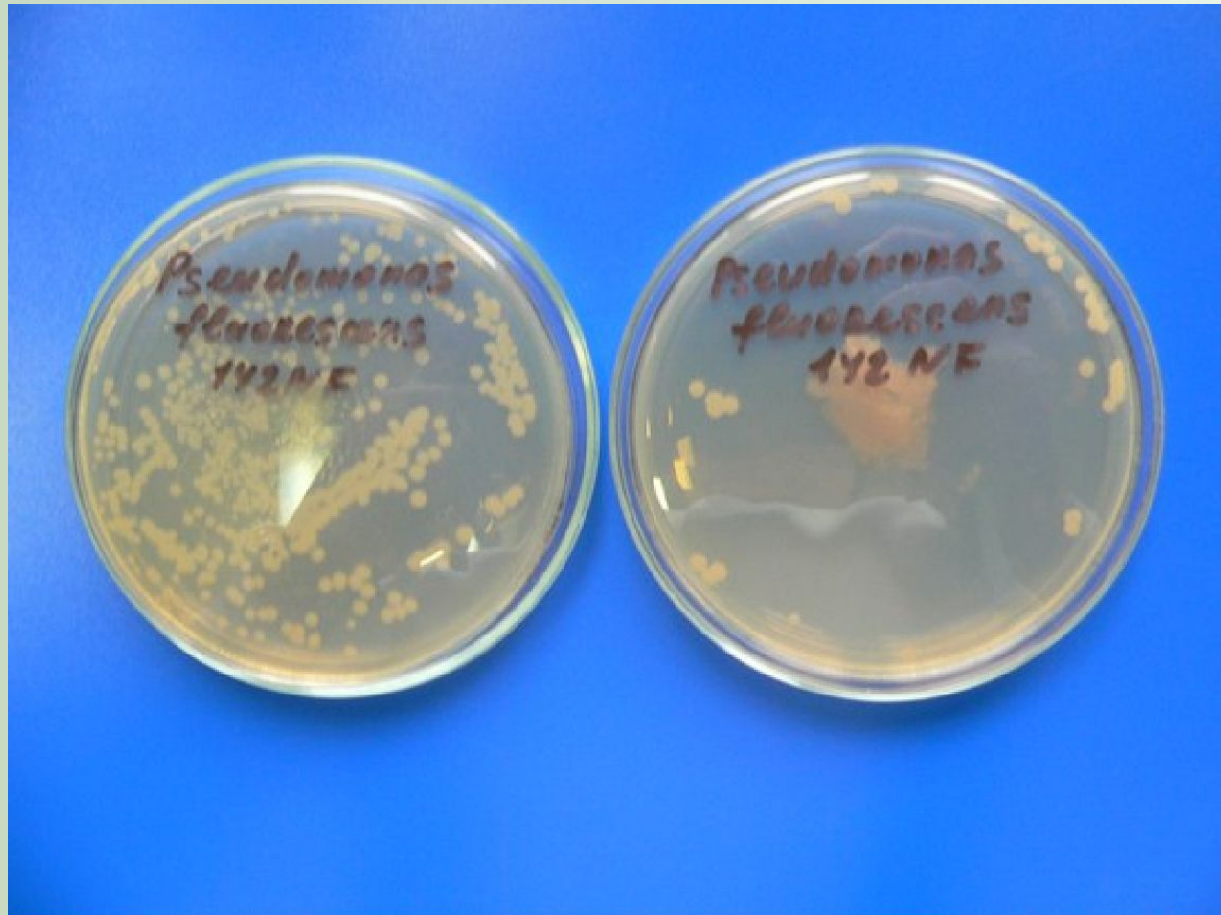




# Fir needles *Pseudomonas fluorescens* 142NF



# Onion *Pseudomonas fluorescens* 142NF



# Garlic *Pseudomonas fluorescens* 142NF



# Fir needles *Pseudomonas putida* BS 3701



# Onion *Pseudomonas putida* BS 3701



# Garlic *Pseudomonas putida* BS 3701

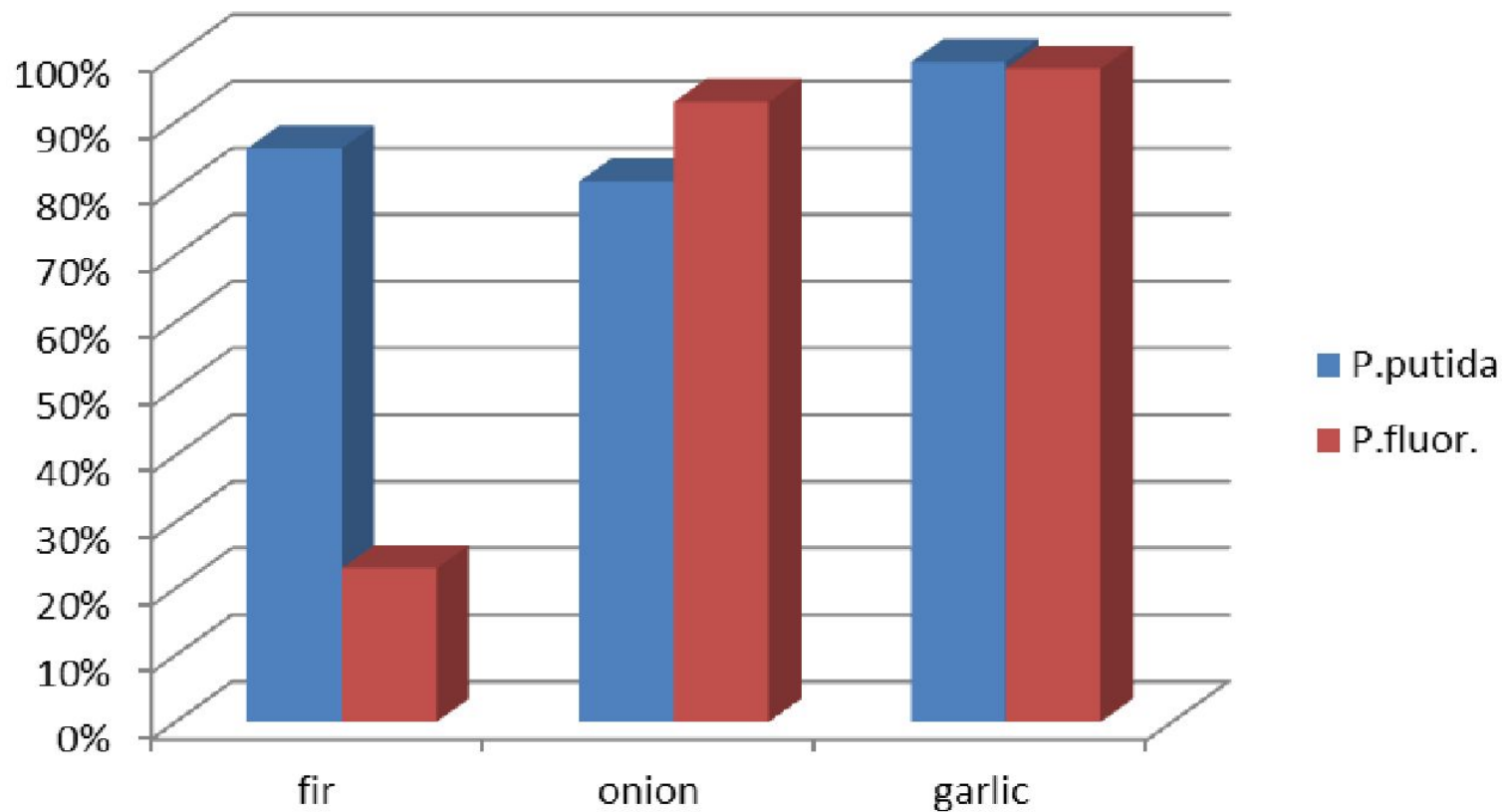




*Number of alive  
microorganisms per Petry  
dish*

Experiment Species of microorganisms	Cont rol	Phytoncides		
		Fir needl es	Onion	Garlic
Pseudomonas fluorescens 142NF	382	295	24	7
Pseudomonas putida BS 3701	400	57	76	1

# *Killed activity of different phytoncides (percent)*



# *Conclusion*

- So, the experiments show that phytoncides protect plants and work by preventing the growth of the attacking microorganisms. The phytoncides play important part in immunity of plants.

Thank you for attention!