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**DAFNAE**  
Department of Agronomy Food  
Natural Resources Animals Environment



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**ASSOF** FLORO  
LOMBARDIA



# Isolation, Characterization and Identification of EPN from west Lombardia, Italy

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## Visiting at DAFNAE, UNIPD



Regione Lombardia

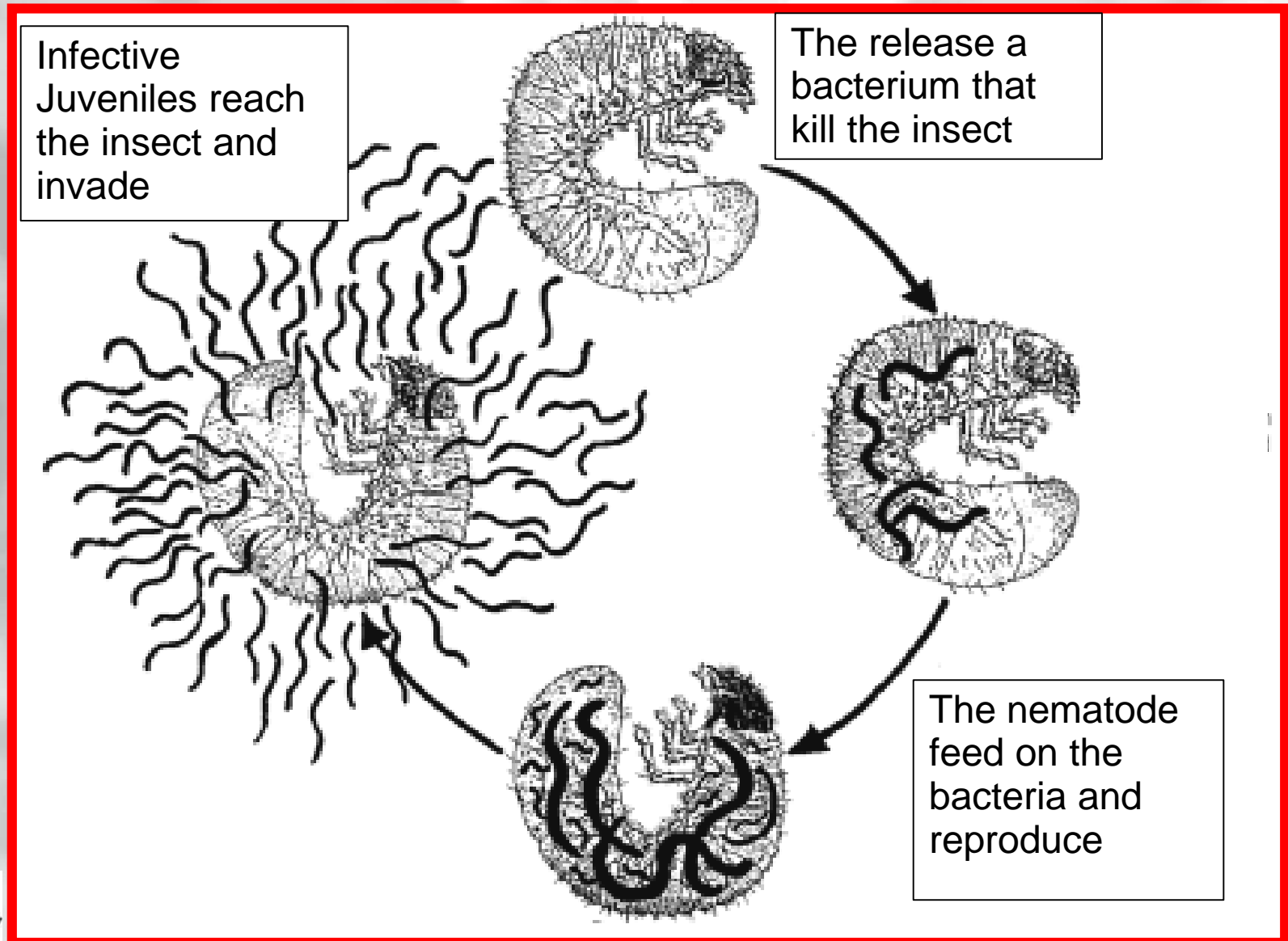
**ERSAF**

ENTE REGIONALE PER I SERVIZI  
ALL'AGRICOLTURA E ALLE FORESTE

# Japanese beetle (*Popillia japonica*)

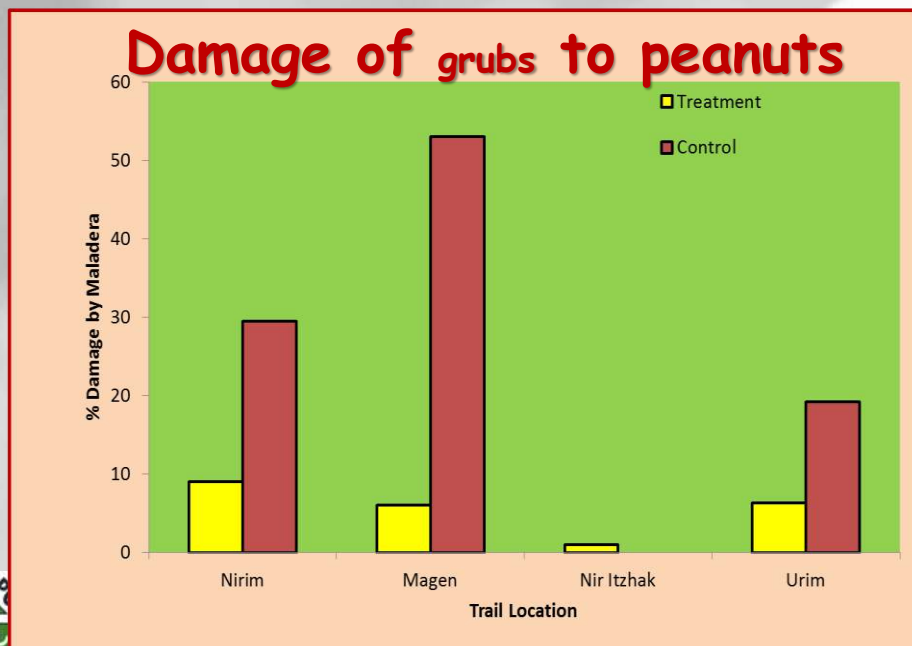


# Infectivity of Entomopathogenic nematodes (EPN) Steinernematidae & Heterorhabditidae



# In Israel

## Use of EPNs for Control of White Grubs (*Maladera matrida*) in Peanut Fields



# In Lombardia

Survey for grubs- Soil samples

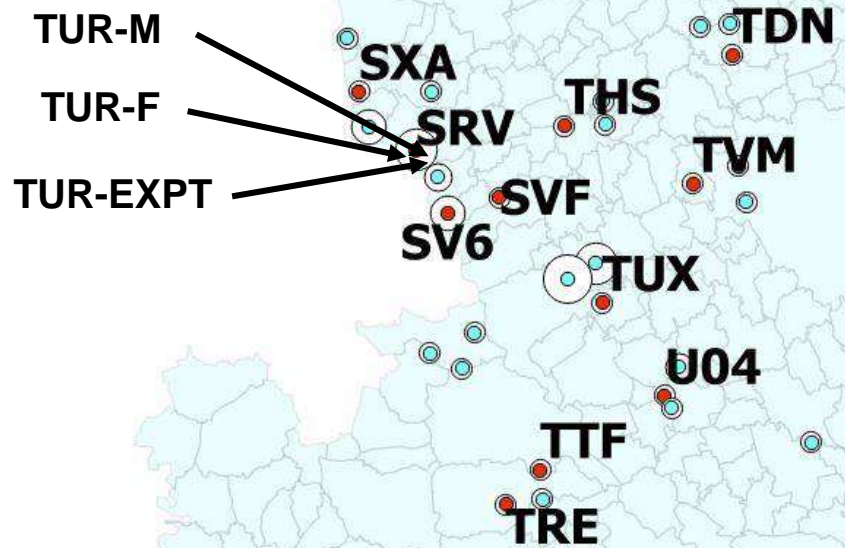


Incubation at 25°C  
for 7 days



Detection of EPN (26/63 samples positive)

**Turbigo:**

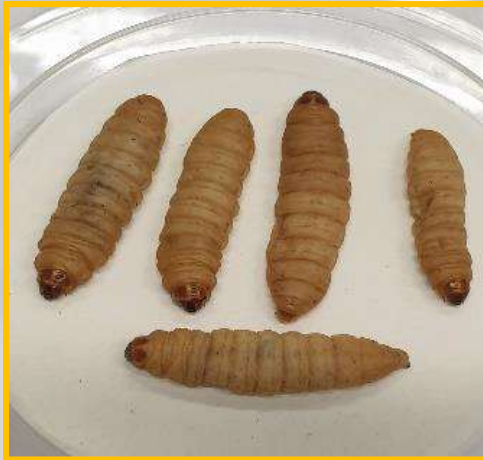


# Identification- cadaver color

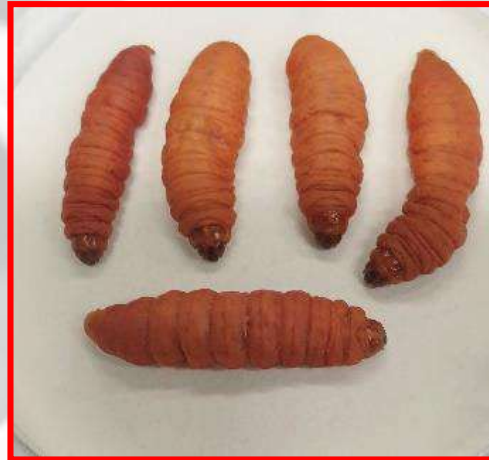
Steinernematids

Heterorhabditids

Sc



Hb



Non Infected

# New Isolated strains

## Steinernematids



SRV



Sc



T34 + Om



SXA



TDN



TUR-F + Om



TUR-M + Om



TUR-Expt



# Heterorhabditids



Hb



TSY+ Om



TUX+ Om



THS



SVF + Om



SV6

# New isolated strains

?????  
*Oscheius myriophilus*



U2D



T1K



U04



TRE



TTF

Identification- Taxonomic and Molecular

In Progress in Bari

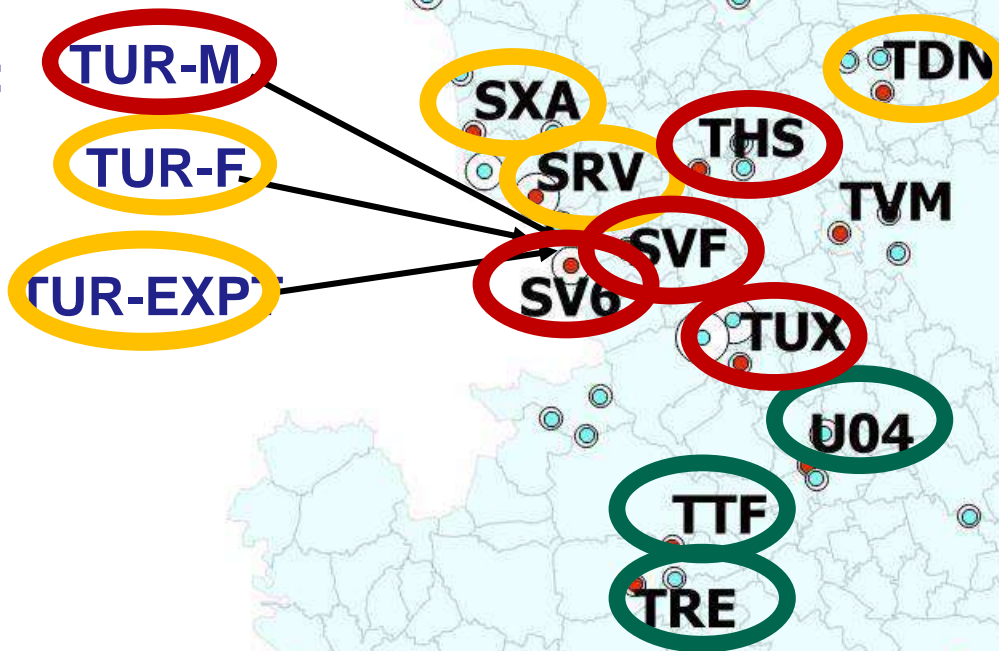
	Sc
SC like	SRV
	SAX
	TDN
	TUR-Exp
SC+ Om	Tur-F
	T34
Hb like	Hb
	THS
	SV6
	SVF
Hb+Om	TUX
	TSY
	Tur-M
Om	U2D
	T1K
	U04
	TRE
	TTF

 Heterorhabditids

 Steinernematids

 Others= *O. myriophilus*

Turbigo:



# Nematode characterization

## Infectivity

Dose response

Invasion rate

## Endurance

Heat tolerance

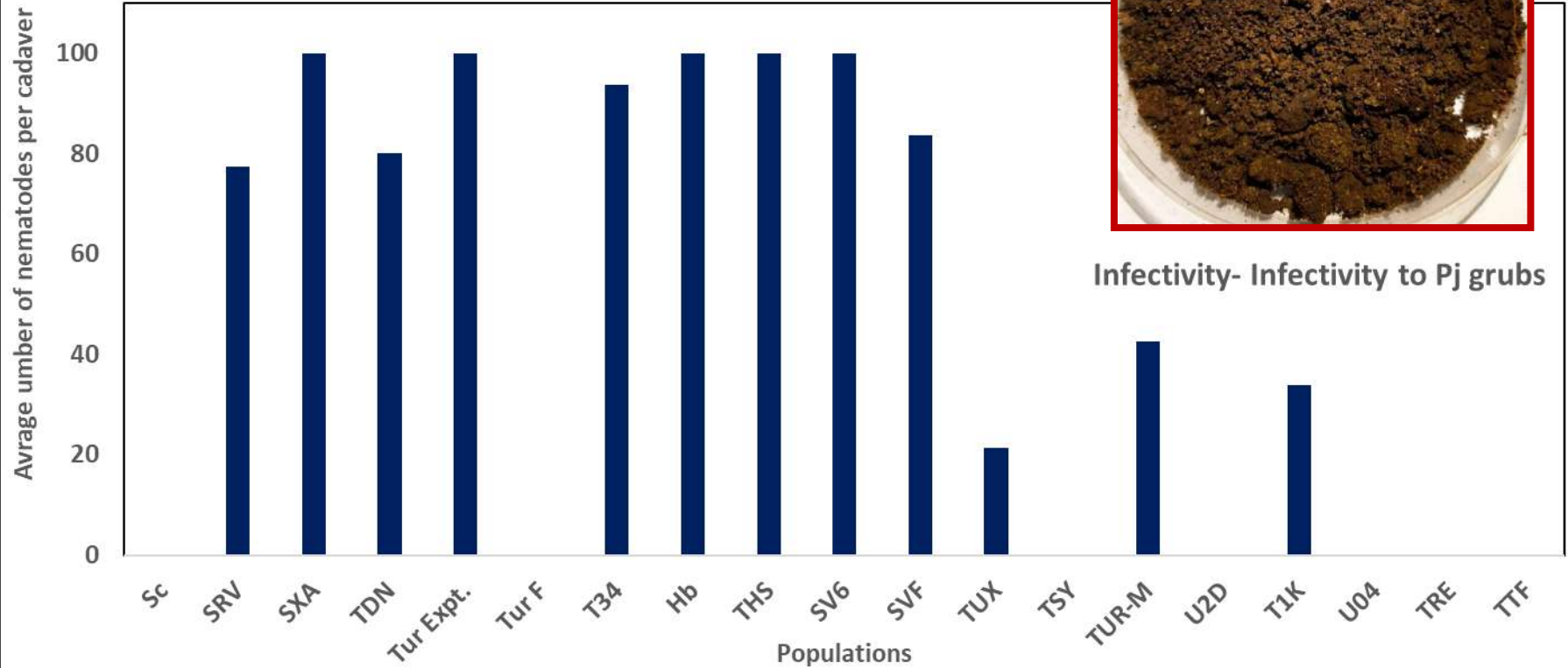
Desiccation tolerance

Efficacy against grubs of *P. japonica*

# Infectivity to grubs



Infectivity- Infectivity to Pj grubs



**Protocol-** Grubs were collected from the infested area (1<sup>st</sup> and 2<sup>nd</sup> instars). Individual grubs were exposed in petri dishes, containing moist soil, to the different nematode populations. The nematodes were applied in 1 ml water at concentration of 1,000 IJ per dish. The dishes were placed at 25°C for 11 or 10 days before the mortality of grubs was determined.

# Infectivity to grubs



Live



Infected





Grazie mille  
per la vostra  
attenzione

