



PINE NEMATODE FIGHT



GEM 2020



NOVA_LXPortugal Team





CONTEXT

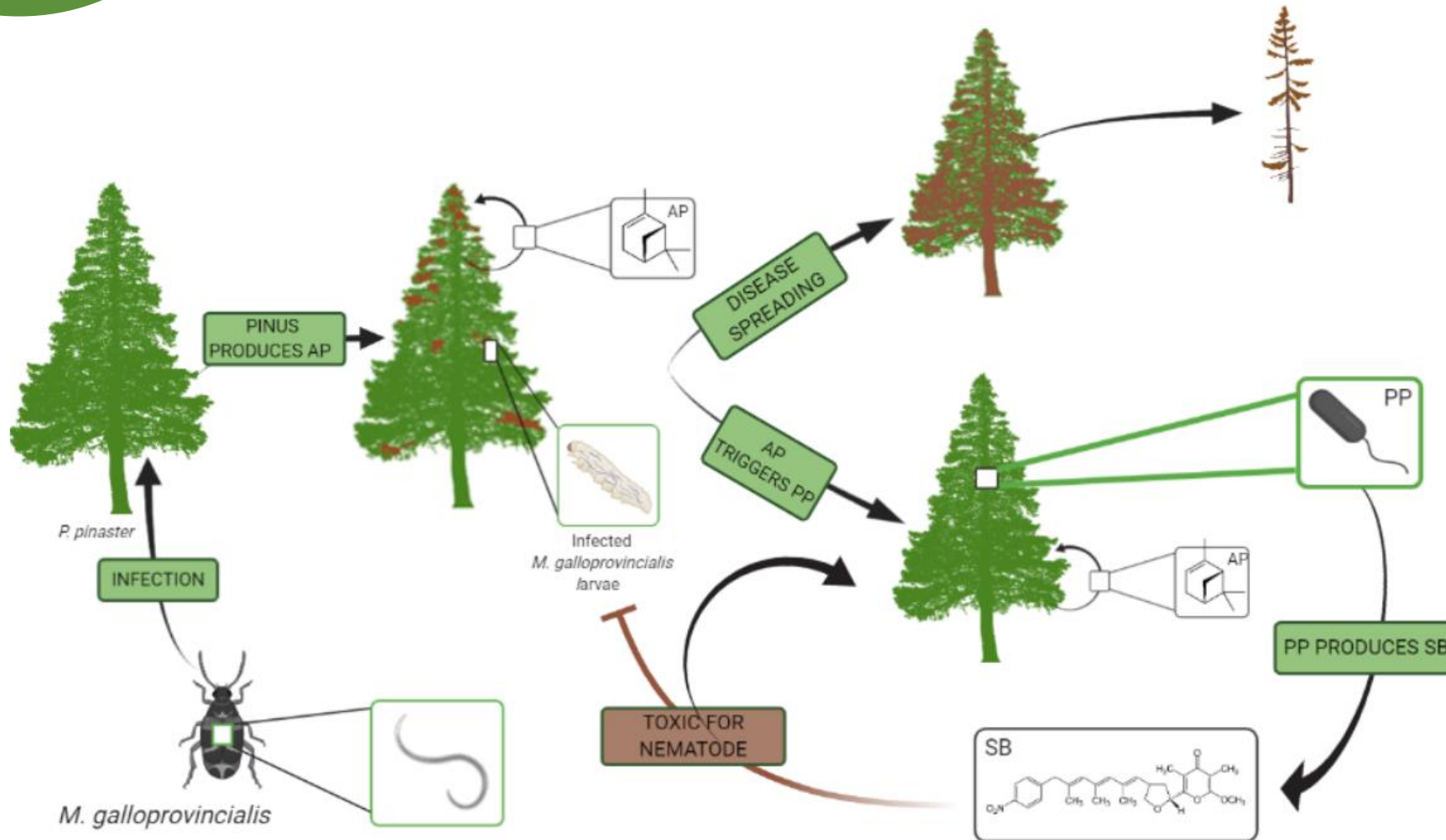
Pinus related business represents 88% of all forest companies.

In 2010, *Pinus pinaster* represented 23 % of Portuguese forests!

Exportations 1830 M €
35% of Portuguese Exportations



OUR STRATEGY



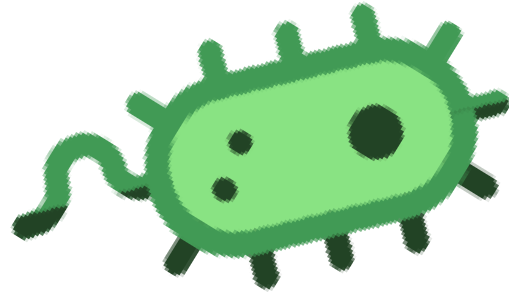
Alpha-pinene (AP)

Pseudomonas Putida (PP)

Spectinabillin (SB)



OUR STRATEGY

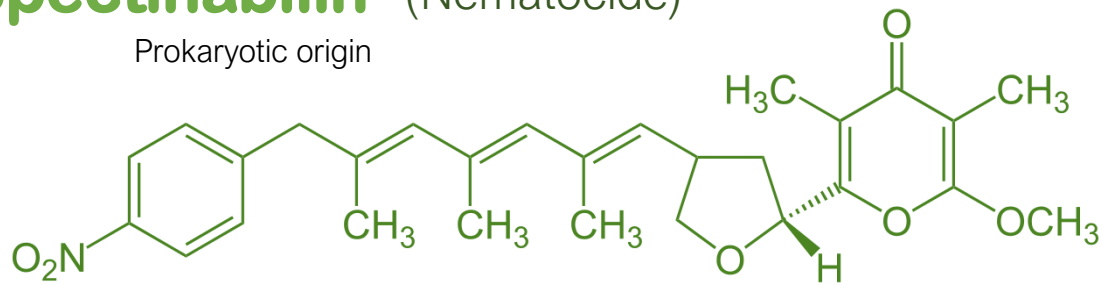


Pseudomonas Putida



Spectinabilin (Nematocide)

Prokaryotic origin



→ Reduces the egg hatching rate



LEGISLATION

Modified strains of *P. putida* in nature

- ✓ Legislation on Deliberate Release of GMO in **the European Union**
 - Respect the requirements of the Cartagena Protocol on Biosafety to the Convention on Biological Diversity
 - Follow the European Union directive 2001/18/EC

The content and requirements of both documents are similar



DRY LAB



Pseudomonas putida KT2440 model



Spectinabilin biosynthesis pathway



HUMAN PRACTICES



Associação das Indústrias de Madeira e Mobiliário de Portugal



Associação Nacional de Empresas Florestais, Agrícolas e do Ambiente



Instituto da Conservação da Natureza e das Florestas



Associação de Destiladores e Exploradores de Resina



FEDERAÇÃO NACIONAL DAS ASSOCIAÇÕES DE PROPRIETÁRIOS FLORESTAIS



EMPRESA DE CELULOSE DO TEJO, S.A.





iGEM Global Meet-up



GLOBAL MEETUP

AUGUST 20-22