

Protecting pine plantations from various hazards by setting up experimental broad-leaved hedges

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SCIENCE & IMPACT



Margot Régolini, Frédéric Bernier, Ander Gonzalez, Nahia Gartzia/ FORRISK final conference- 09/09/2014

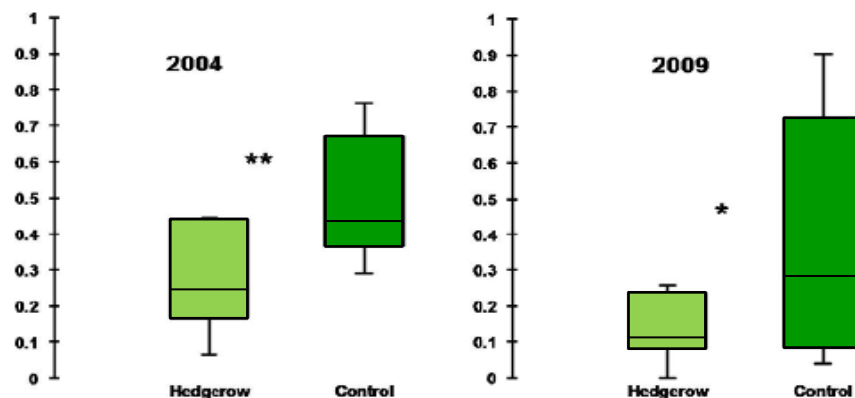
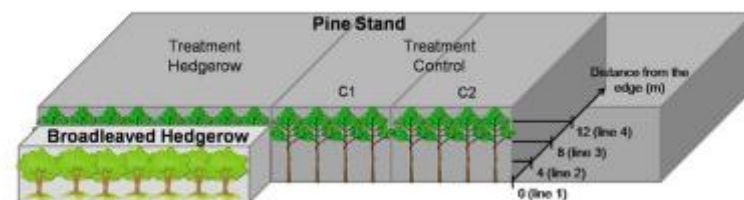

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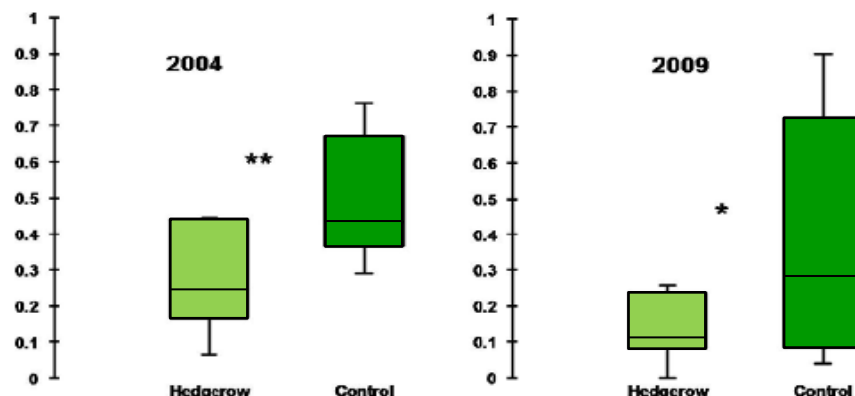
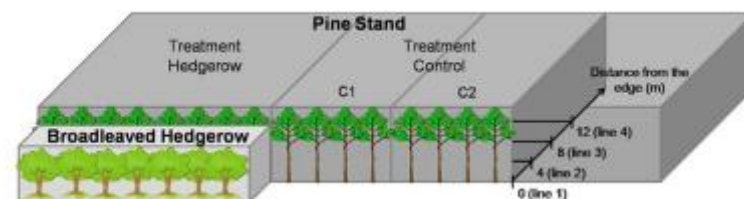
➤ **Context:** observations have shown that broadleaf hedges can protect the interior of pine plantations against some hazards

- Biotic attacks: example of the pine processionary moth (Dulaurent et al., 2012) with physical and chemical protection
- Wind storm
- Fire (broad-leaved trees are less flammable than pine trees)
- Soil protection (against erosion)
- ...



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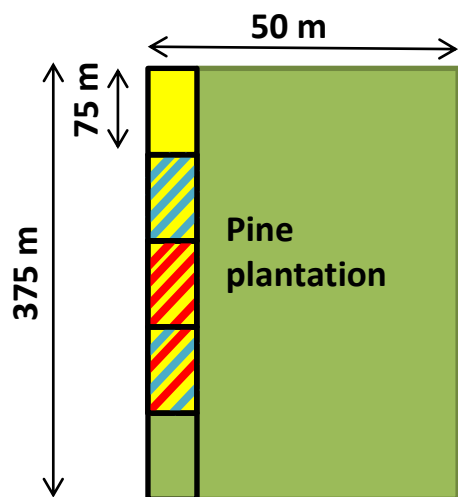
- **Context:** observations have shown that broadleaved hedges can protect the interior of pine plantations against some hazards
- **Aim:** setting up an experiment to test these observations and hypotheses
- **Collaborative work: two regions** (Basque Country and Aquitaine)
 - Aquitaine: mainly biotic risks at first, and then wind risk (after 1st thinning)
 - Basque Country: various risks (related to slopes such as avalanches, soil protection).



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4 Modalities (with 3 rows of broadleaved)+ 1 control

-  1- Birch
-  2- Birch+ **Eucalyptus** or Lime
-  3- Birch+ **Red Oak** or Pedunculate Oak
-  4- **Birch +Eucalyptus + Red Oak** or Birch + Lime + Pedunculate Oak
-  - Control: no hedges, only **Maritime Pine** or Radiata Pine



Experiment set up on 4 sites (in each region)

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→ Plantations in 2013 and 2014 (mainly winter)



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