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Rothamsted Research



Major insect pests of UK crops



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Aphids in **OSR**, cereals and sugar beet



Peach-potato aphid (*Myzus persicae*) transmits virus in OSR and sugar beet



Grain aphid (*Sitobion avenae*) and bird cherry-oat aphid (*Rhopalosiphum padi*) transmit virus in cereals

Beetles in **OSR**



Pollen beetle (*Meligethes aeneus*)

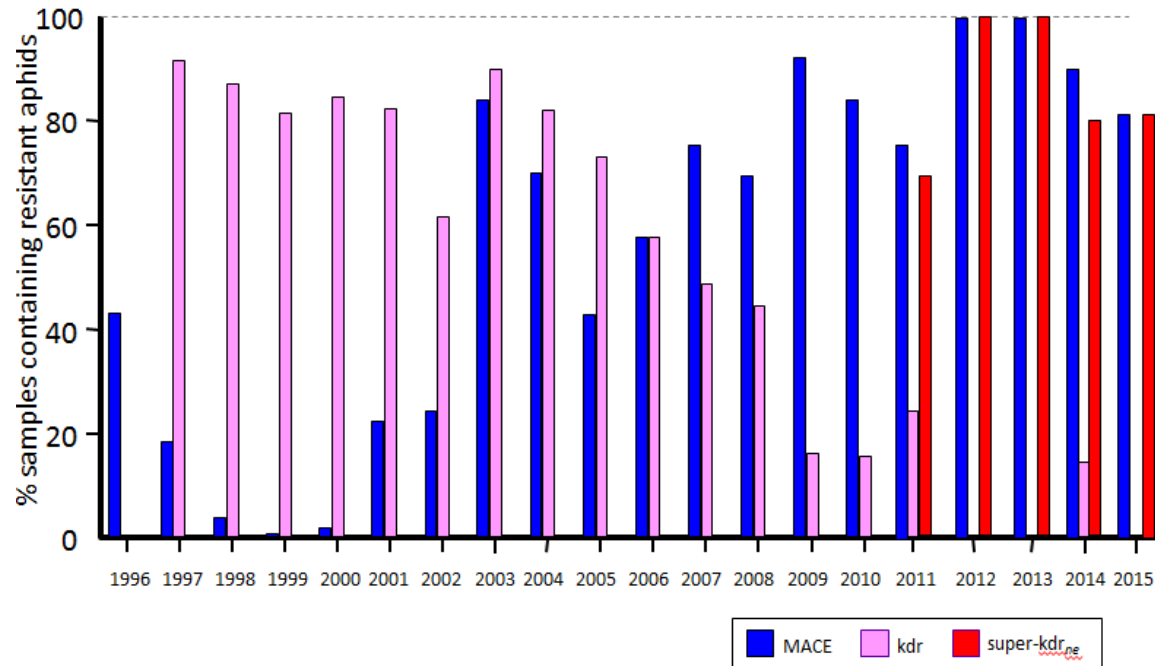


Cabbage stem flea beetle
(*Psylliodes chrysocephala*)

Insecticide resistance in *M. persicae*



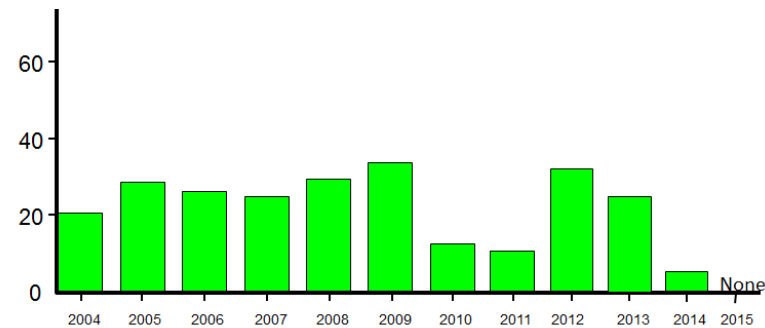
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MACE =
Resistance to carbamates
kdr =
Resistance to pyrethroids

Field samples % with low (Nic-R)
neonicotinoid resistance

Good news! No Nic-R⁺ or Nic-R⁺⁺
found



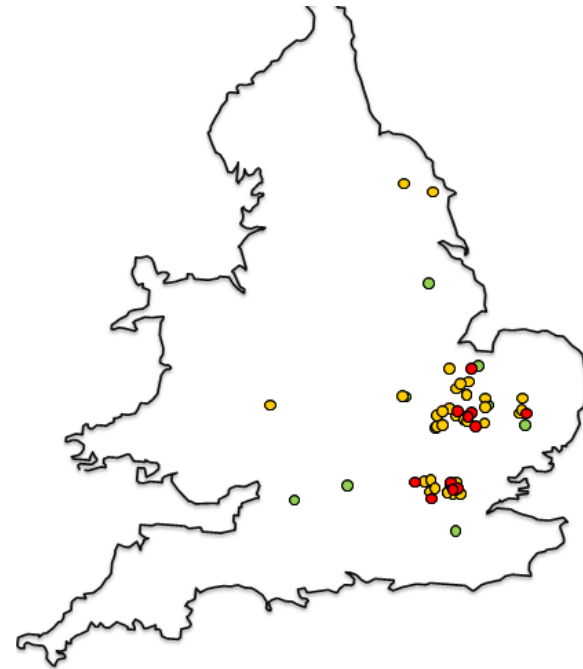
Current position for CSFB /OSR



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- Still have restrictions on use of neonicotinoids on crops that flower
- The UK government have allowed a small number of farmers (5%) to sow neonicotinoid-treated oilseed rape this autumn
- This is for farmers where there is high level resistance to pyrethroids in cabbage stem flea beetles

- 0% resistant beetles
- 0%-50% resistant beetles
- >50% resistant beetles



- The effects on CSFB will be monitored (ADAS and Rothamsted)
- EU are reviewing the restrictions – Likely outcome?

EASAC report conclusion 4



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Report April 2015

Resulted in headlines like:

‘Stinging verdict on bee-killers’

4 stated conclusions



Conclusion 4) Widespread use of neonicotinoids (as well as other pesticides) constrains the potential for restoring biodiversity in farmland under the EU’s Agrienvironment Regulation.

This may be the most far reaching conclusion as it is likely to lead to calls to extend the neonicotinoid restrictions and expand them to other crops and other insecticides.