

# Common Cruciferae



*Brassica napus*



*Brassica rapa*

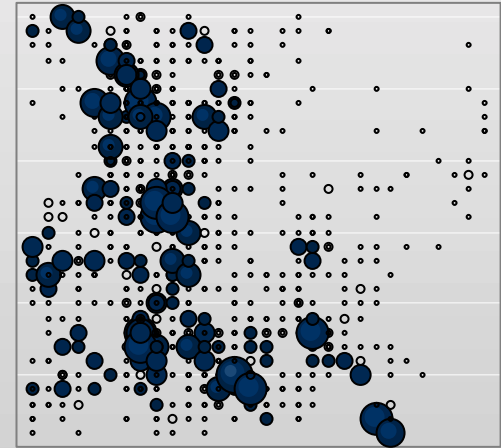
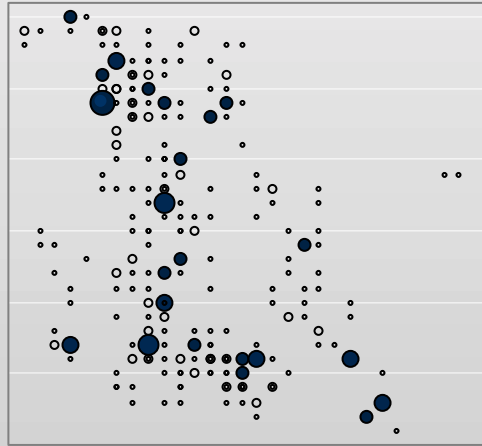
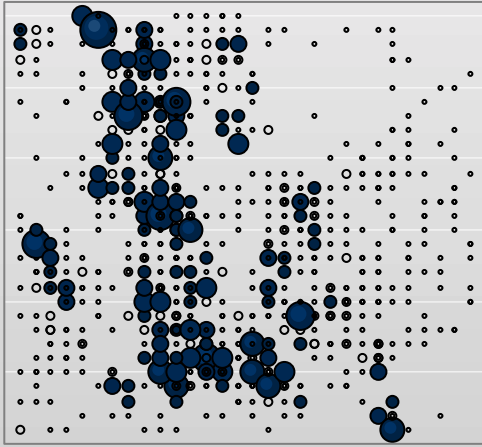


*Raphanus raphanistrum*

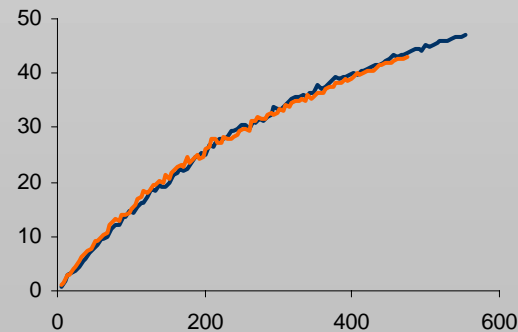
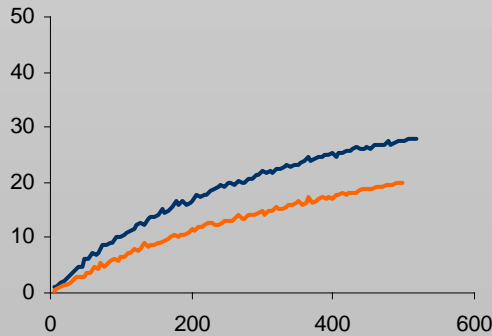


*Sinapis arvensis*

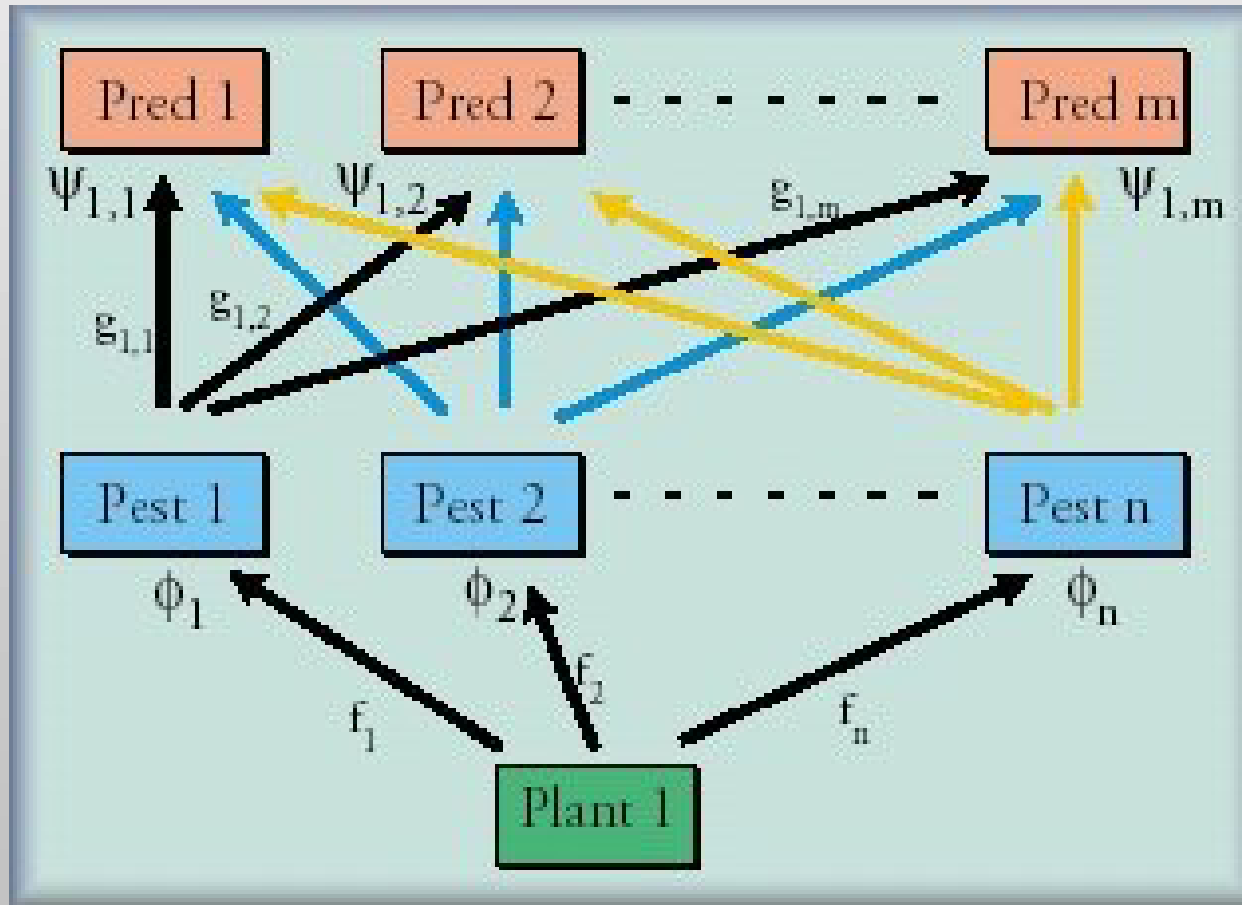
# Will OSR affect rest of seedbank ?



Community-scale ↓ properties



# Will it affect transmission through food webs ?



# Ecological impact - conclusions

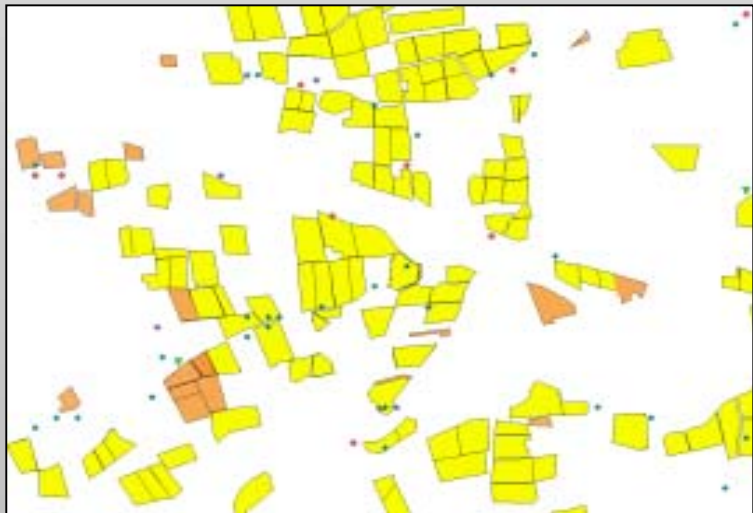
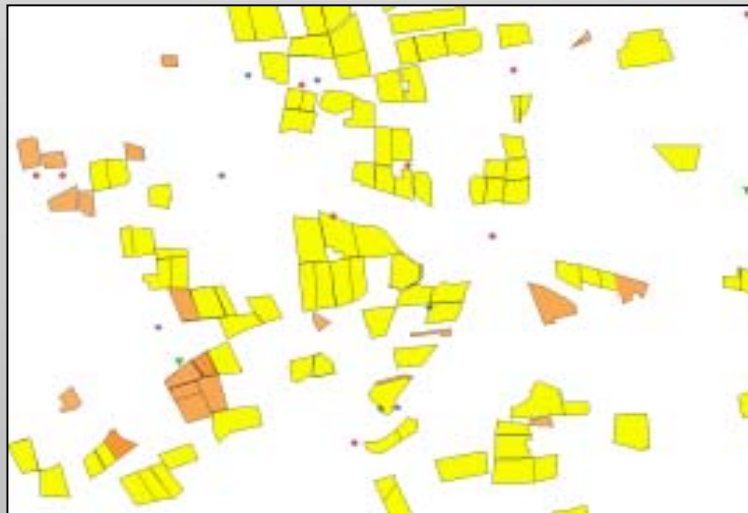
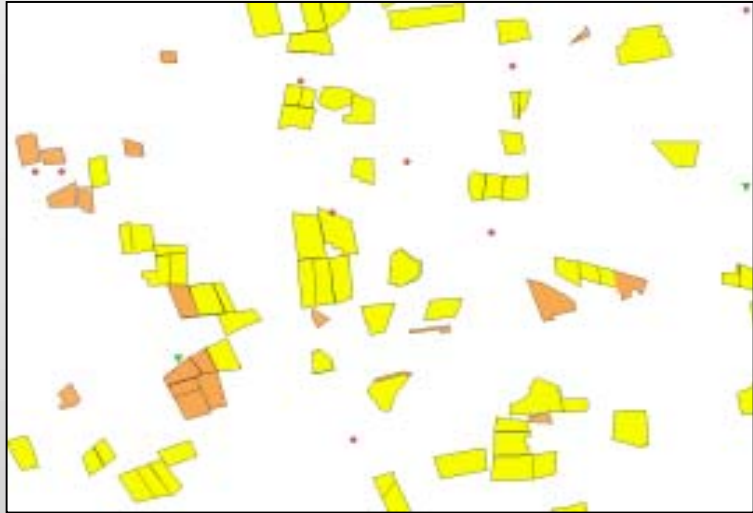
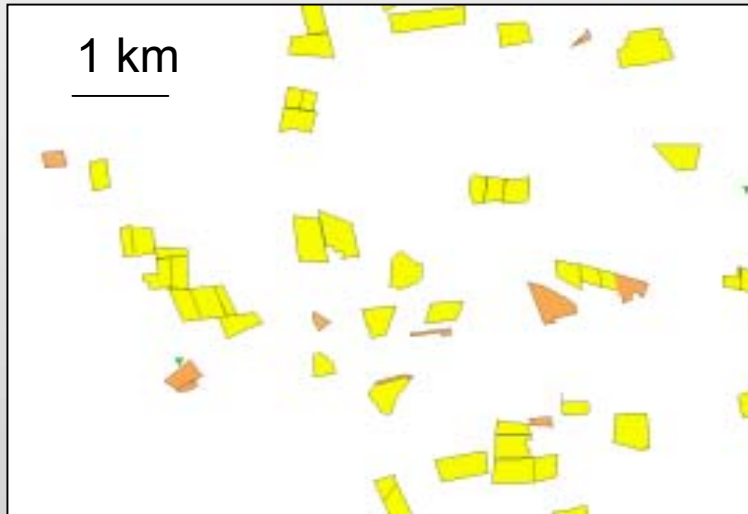
## Ferals and hybrids -

- Negligible effect on integrity of soil
- Negligible effect on main habitat processes
- Mainly fill vacant space – ferals typically 100 m<sup>-2</sup>
- But might alter seedbank species abundance or species composition
- And some transmission of effect to food web

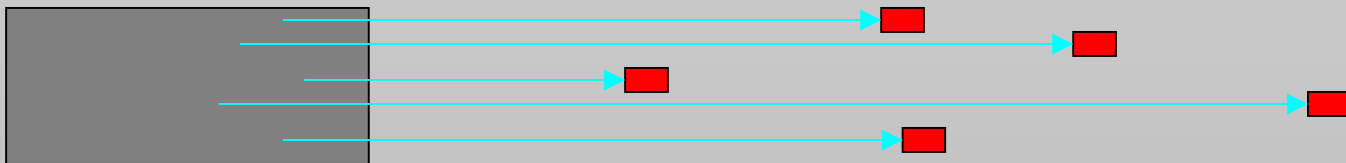
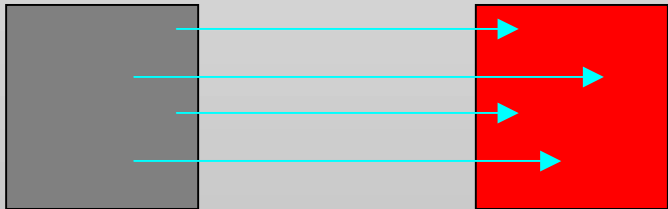
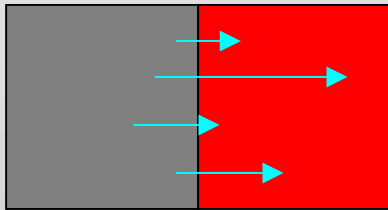
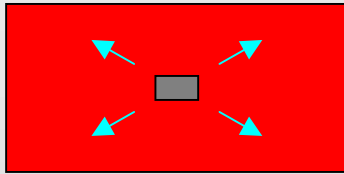
## 2. Impurities in yield

- Distance and frequency
- Persistence over time
- Food quality
- Perception and preference

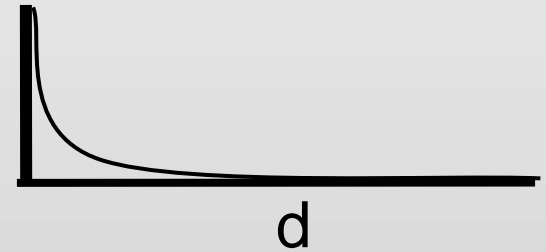
# Distance and time?



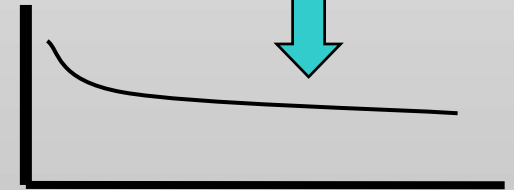
# Gene flow depends on context



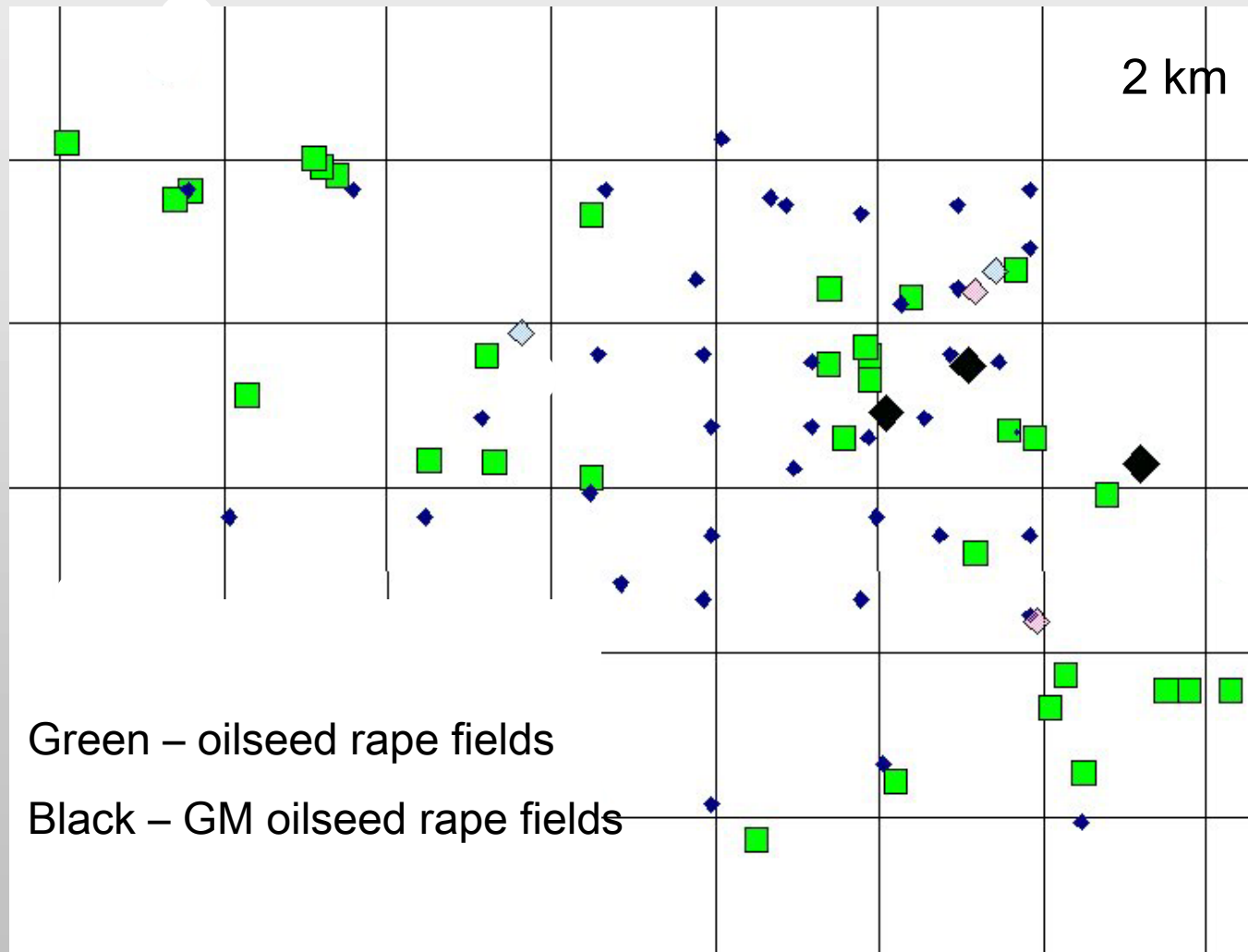
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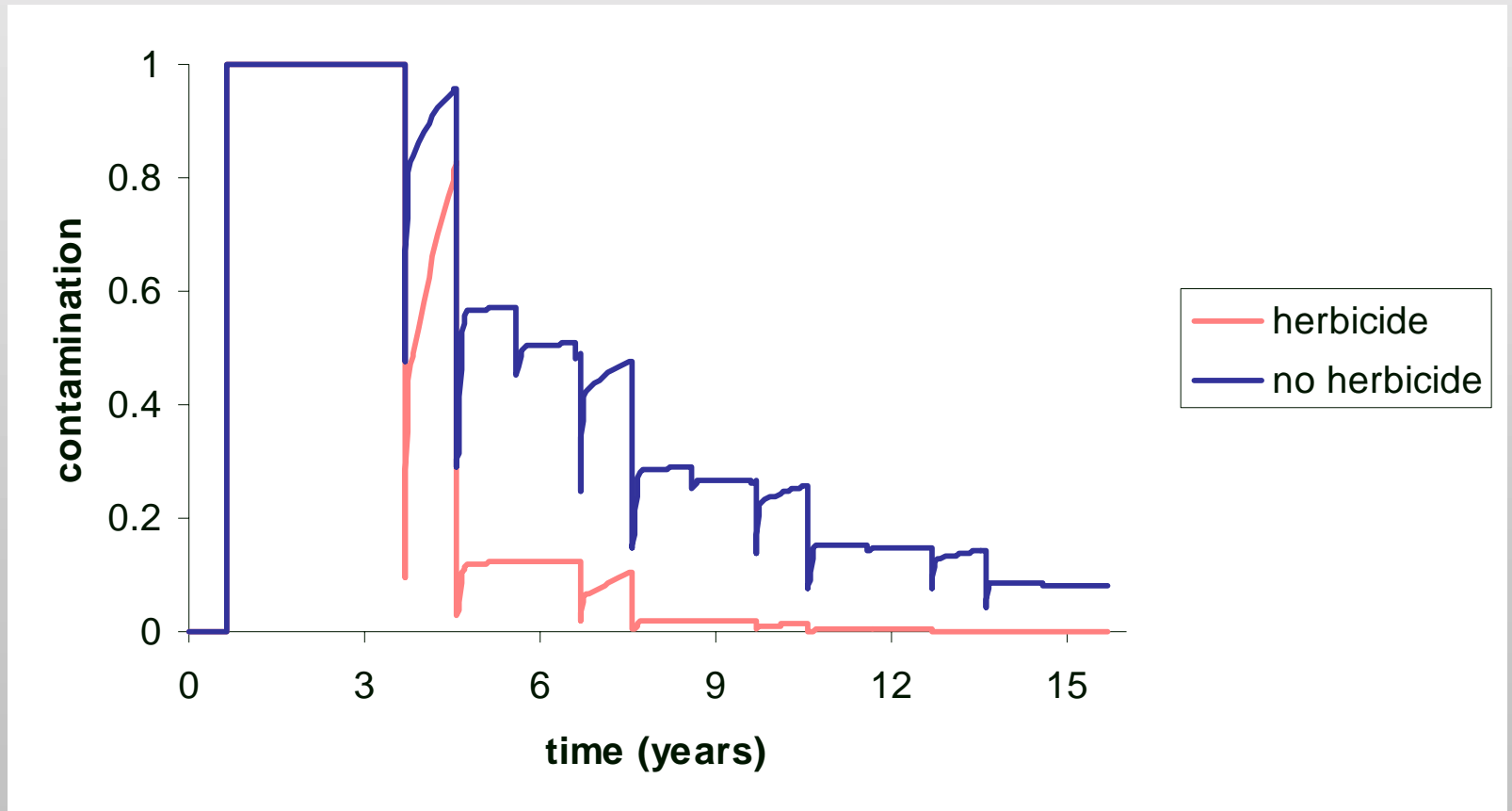
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# Analysis in progress (2002)



# Impurities in OSR decay slowly



# Impurity in yield - conclusions

- Not preventable in oilseed rape under present arable cropping
  - at low frequency over several km, mediated by a range of insect vectors and wind-borne pollen
  - regional process depending on the configuration of fields in a locality
  - cross pollination between nearby fields is 1 in 1000 or less (higher to fields of partial male fertility)
  - In-field ferals can contribute more (i.e. 1 in a 100) to impurities
- Can be limited
  - < 0.1% not practicable
  - < 1% uncertain and only with the most rigorous standards

# Conclusions

Of ferals and hybrids –

- Ecological effects small
- Low level of impurity in harvest will be difficult to manage
- First conclusion might have to be modified if field practice changes