

Plants as food resource for pollinators and other insects

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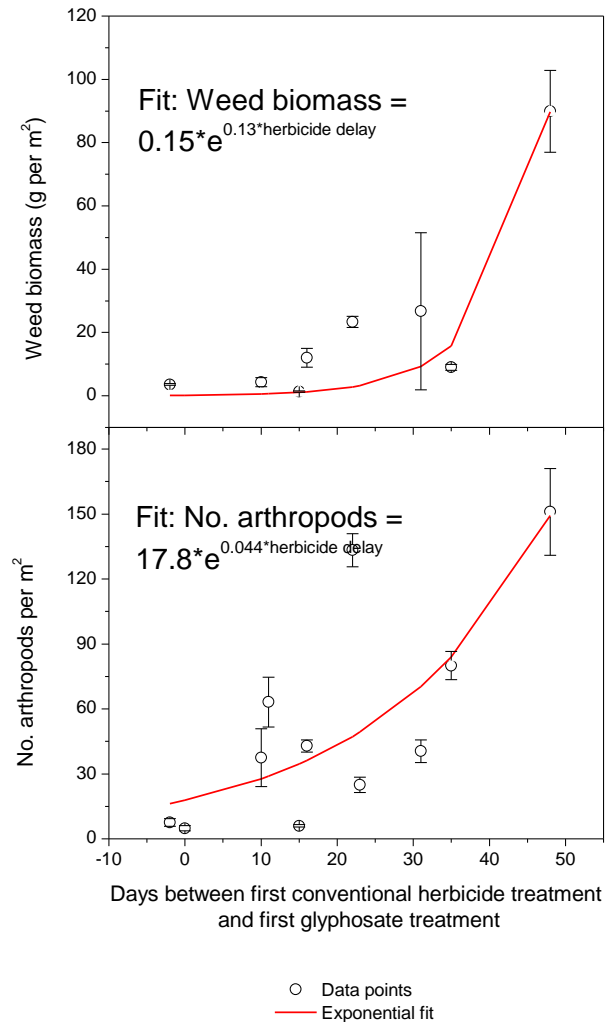
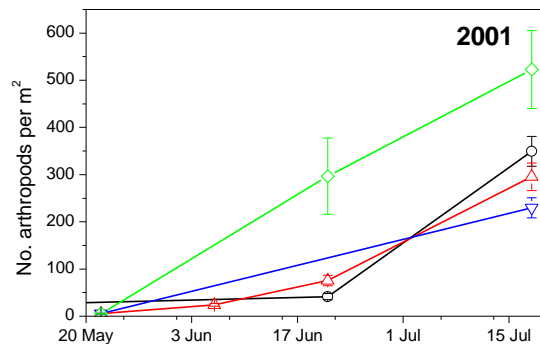
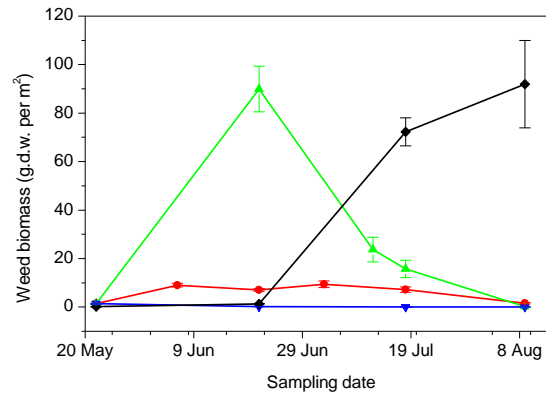
Background and research field

- Plant ecology
- Focus: Plants as food resource for insects
- Plant-insect food-webs in agricultural fields
- Plant reproduction and effects of anthropogenic activities (primarily agricultural practice, pesticides) on reproductive output (flowering, pollen and nectar, seeds)
- Food resources in different landscapes
- How can availability of food be improved?

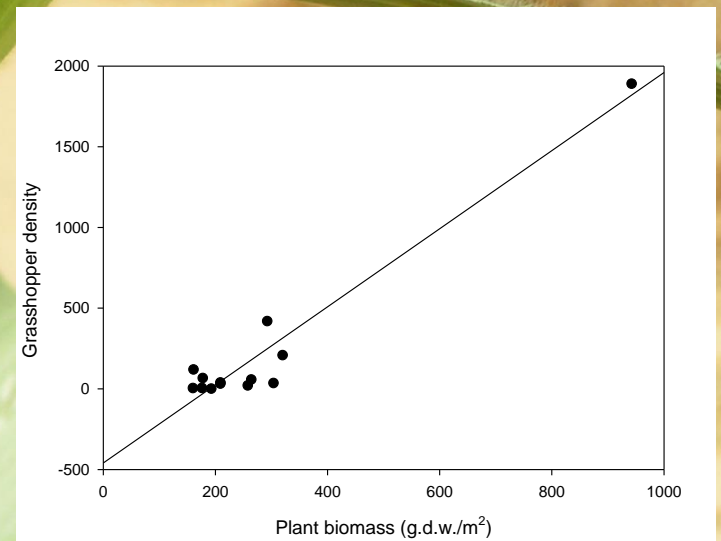
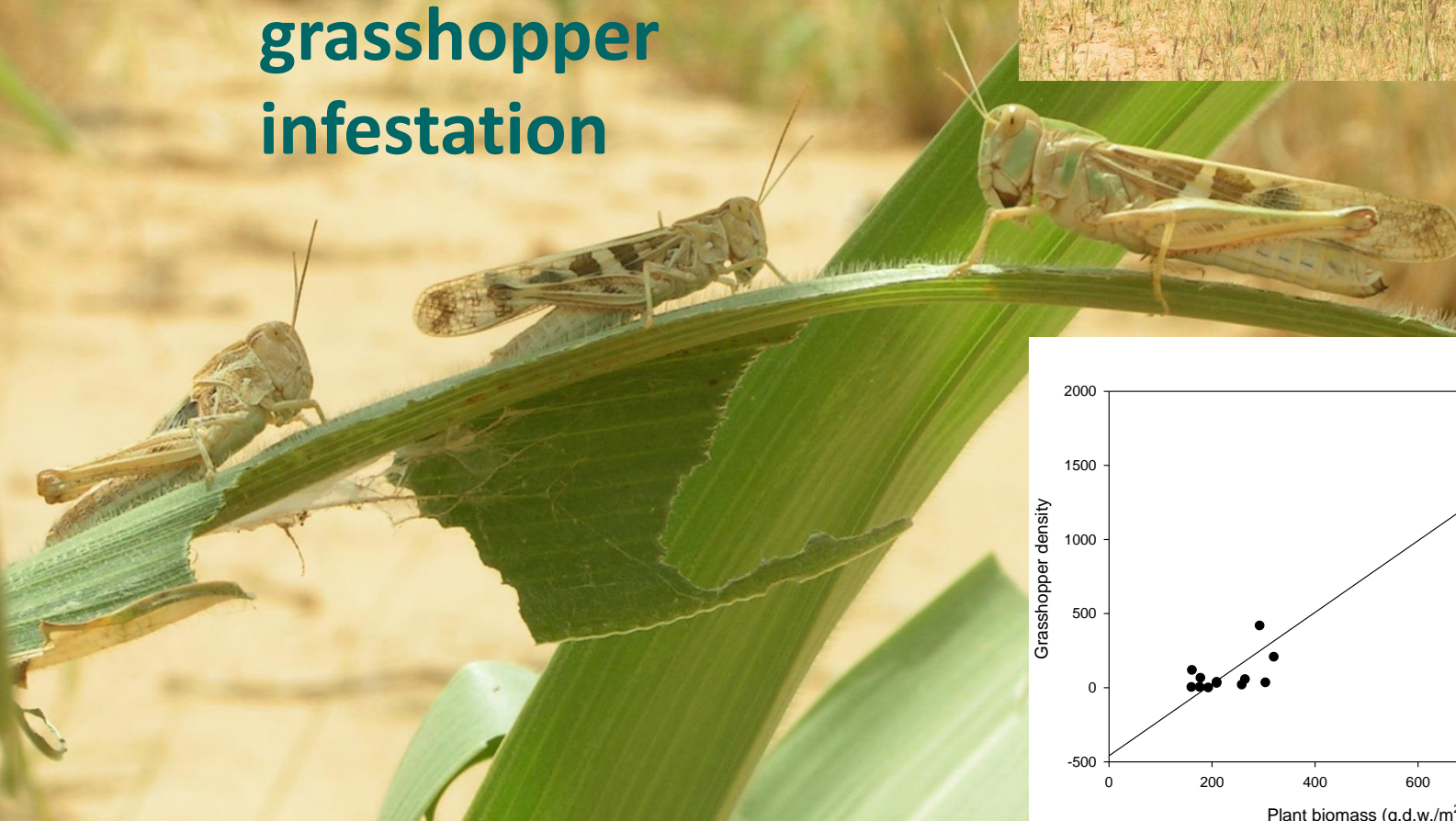
Highlights



Weeds and arthropods in sugar beet (GM or conventional)

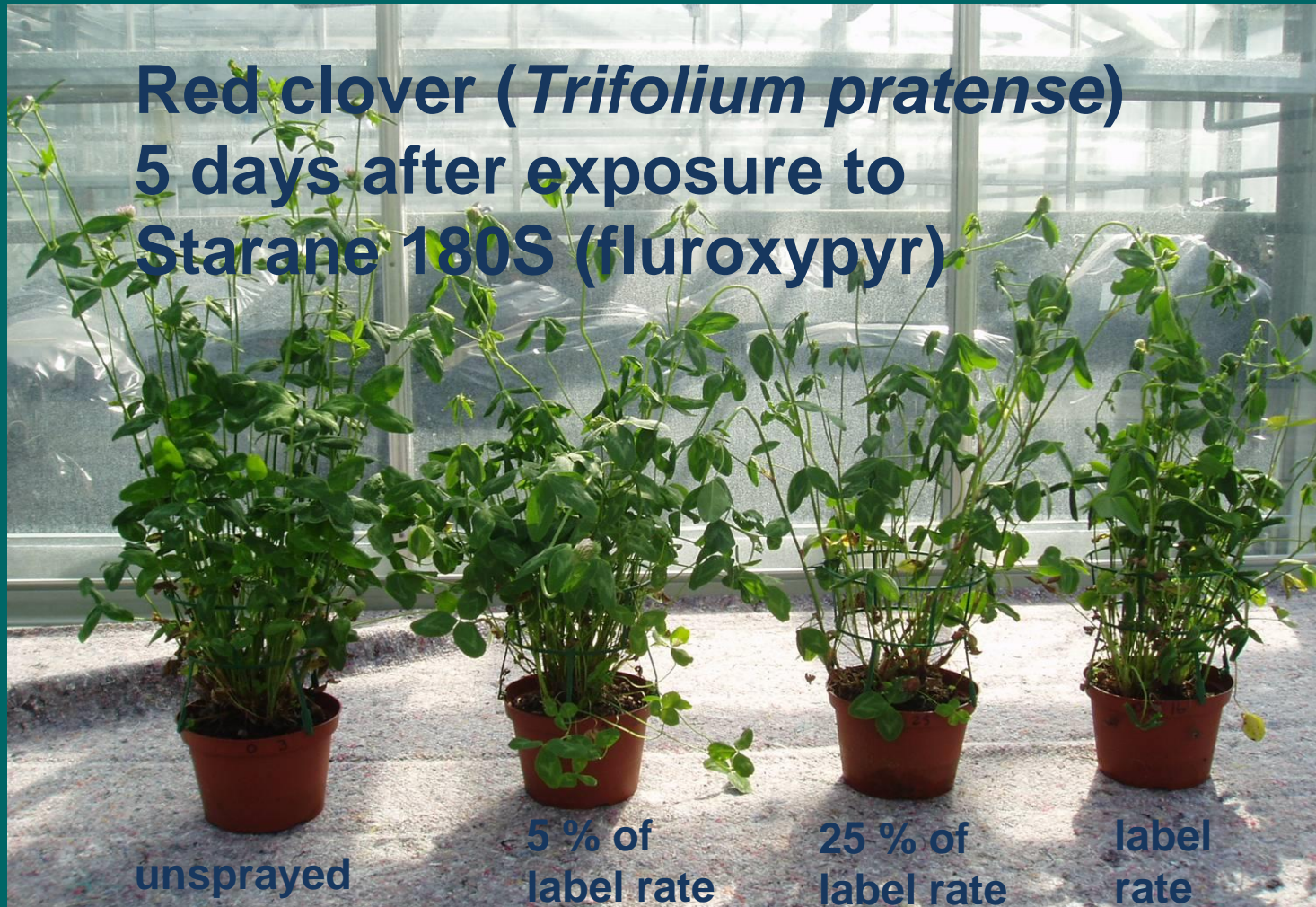


Importance of grassland species composition and biomass for grasshopper infestation



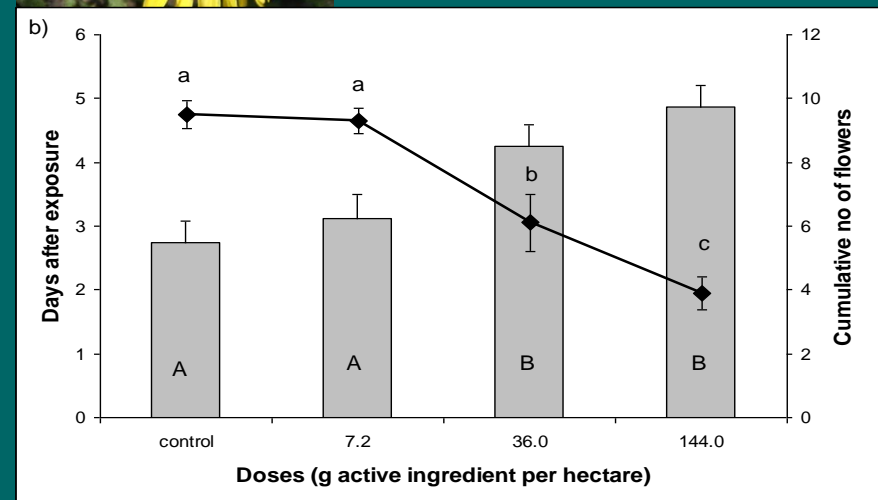
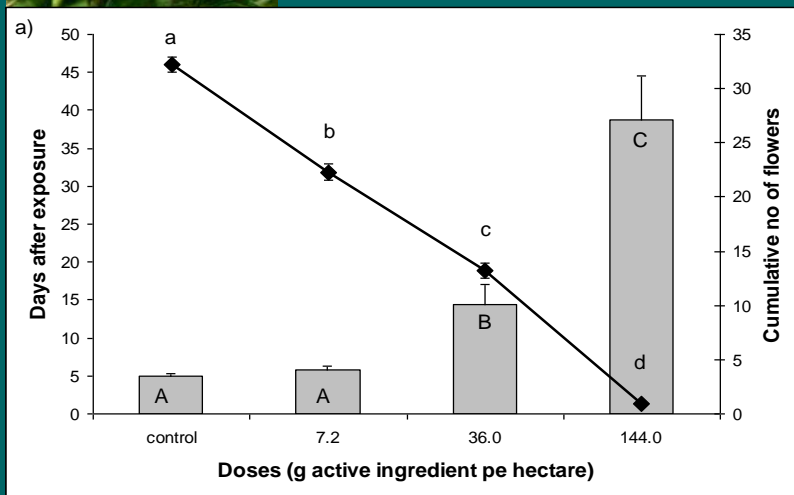
Application of herbicides affect plant flowering negatively

Red clover (*Trifolium pratense*)
5 days after exposure to
Starane 180S (fluroxypyr)



Application of herbicides affect plant flowering negatively

- Herbicides reduce number of flowers
- Herbicides delay flowering

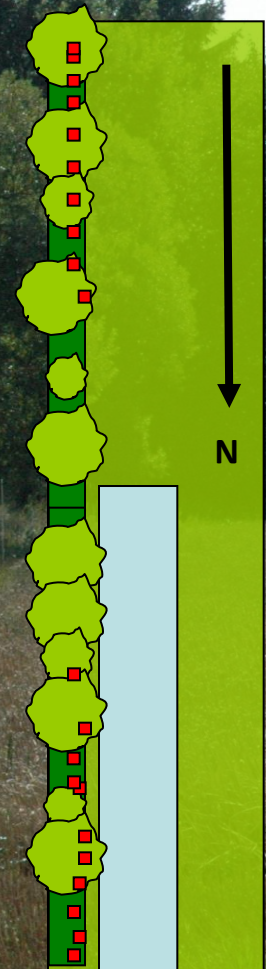


Long-term experimental plot, Kalø

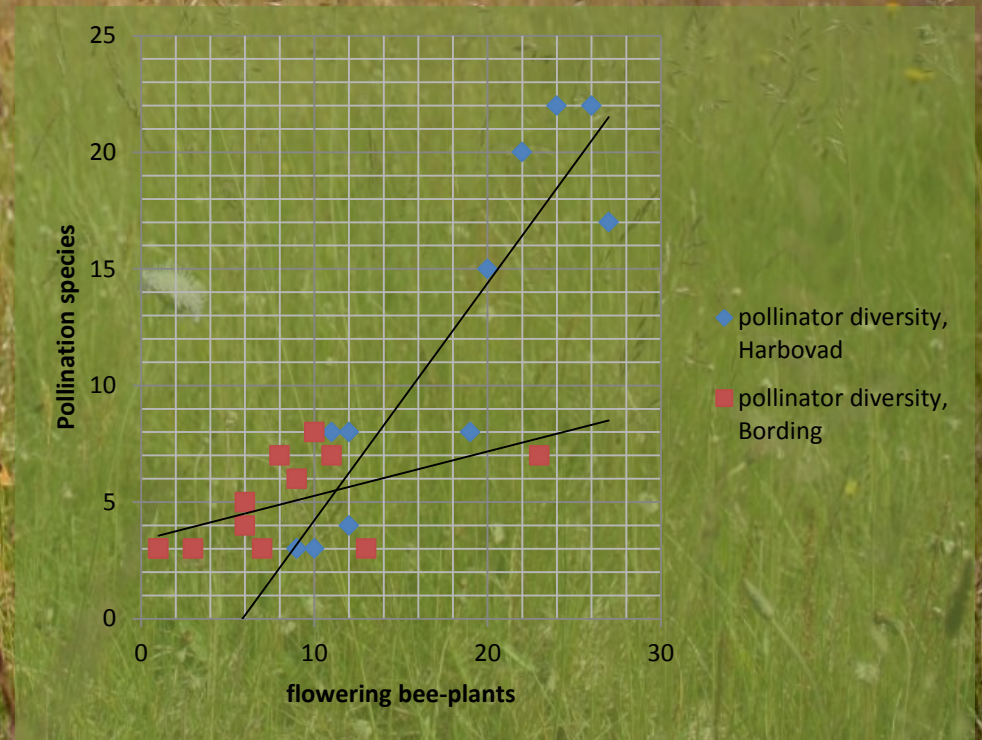


Projektets elementer

- Forandringer i biodiversiteten i hegn
 - Effekten af 20-24 m bred herbicidfri randzone på plantesammensætning, blomstring og blomsterbesøgende humlebier og sommerfugle i hegn
 - Betydningen af økologisk jordbrug for vegetationen i hegn
- Udvikling af indikatorer
 - Indikator for hurtige forandringer
 - Indikator for forandringer på længere sigt



Plant and pollinator diversity in hayfields



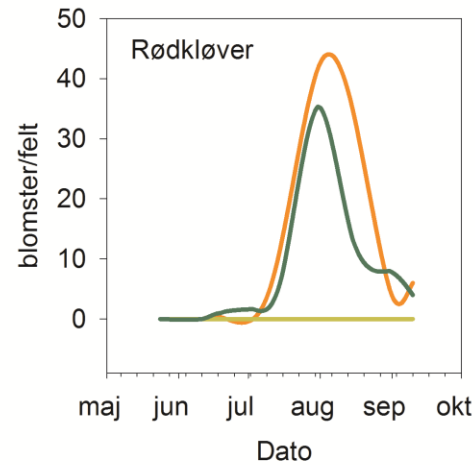
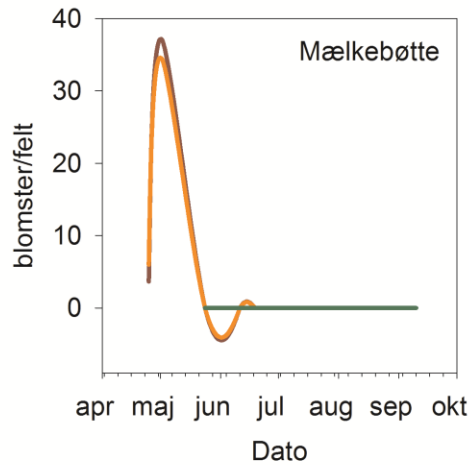
EcoServe experiment at Foulumgård

1. Effect of cutting (variation in timing of 1. cut) and interspecific competition (in mixtures) on plant flowering
2. Relationship between flowering and pollinator activities

Effect of cutting and interspecific competition on plant flowering



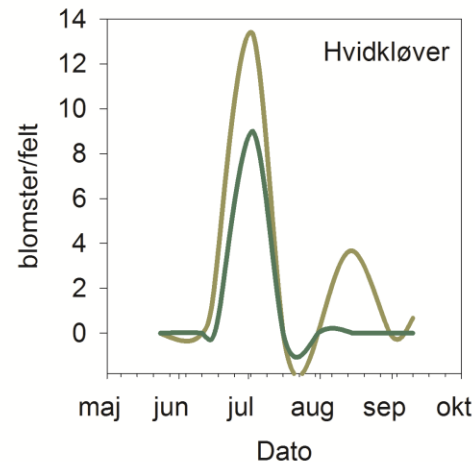
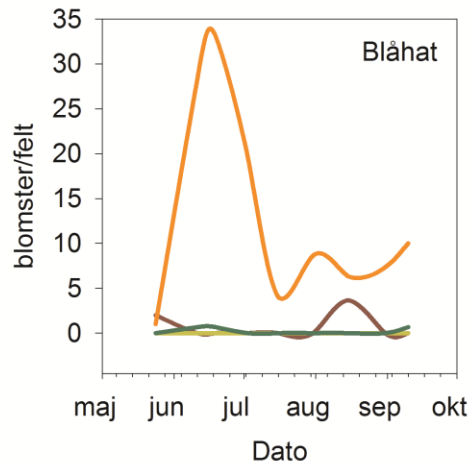
Taraxacum vulgare



Trifolium pratense



Knautia arvensis



Trifolium repens

- | | |
|------------------------------|--|
| — Med slæt uden konkurrence | Cutting, no interspecific competition |
| — Uden slæt uden konkurrence | No cutting, no interspecific competition |
| — Med slæt med konkurrence | Cutting, competition with other species |
| — Uden slæt med konkurrence | No cutting, competition with other species |



Thank you