

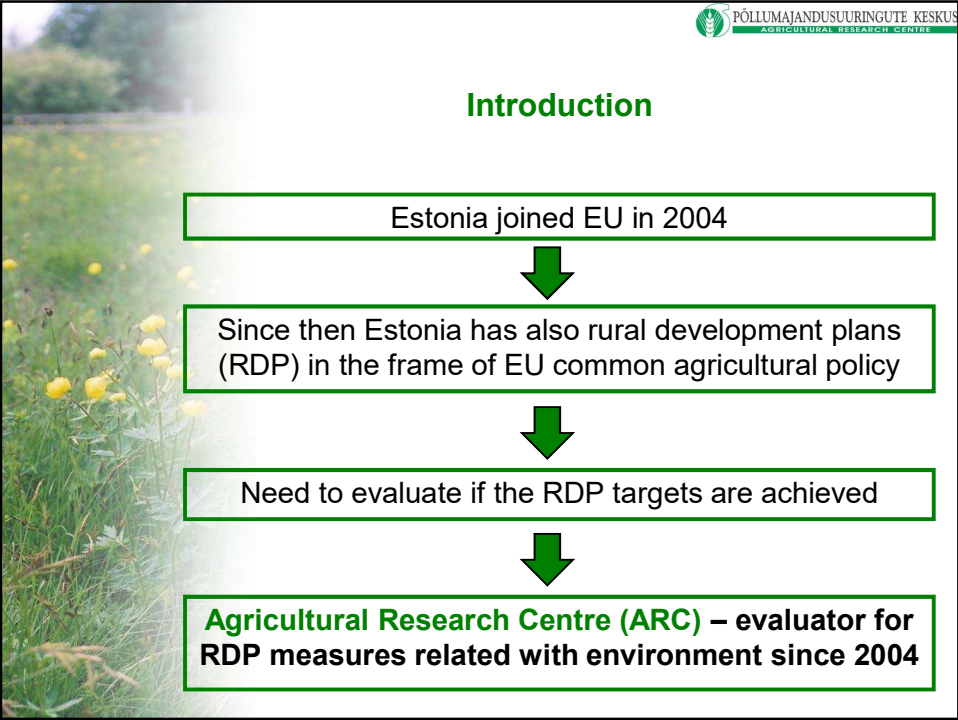
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AGRICULTURAL RESEARCH CENTRE

Bumblebee monitoring in Estonia for the evaluation of rural development plan measures related with environment

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Introduction

Estonia joined EU in 2004

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Since then Estonia has also rural development plans (RDP) in the frame of EU common agricultural policy

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Need to evaluate if the RDP targets are achieved

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Agricultural Research Centre (ARC) – evaluator for RDP measures related with environment since 2004

Biodiversity objective of OF and EFM

Estonian Rural Development Plan (RDP) measures **organic farming (OF)** and **environmentally friendly management (EFM)** have an objective to maintain and increase biodiversity and landscape diversity



Is the objective achieved?

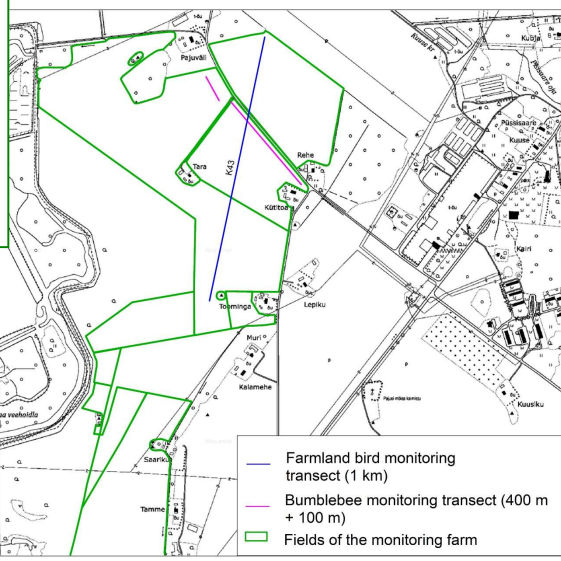


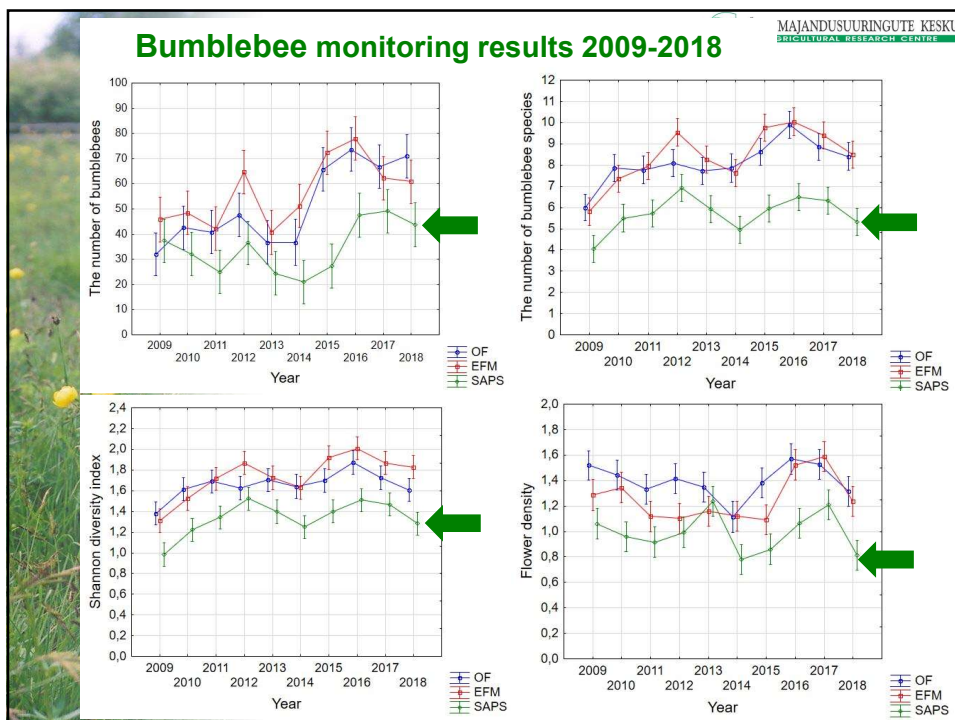
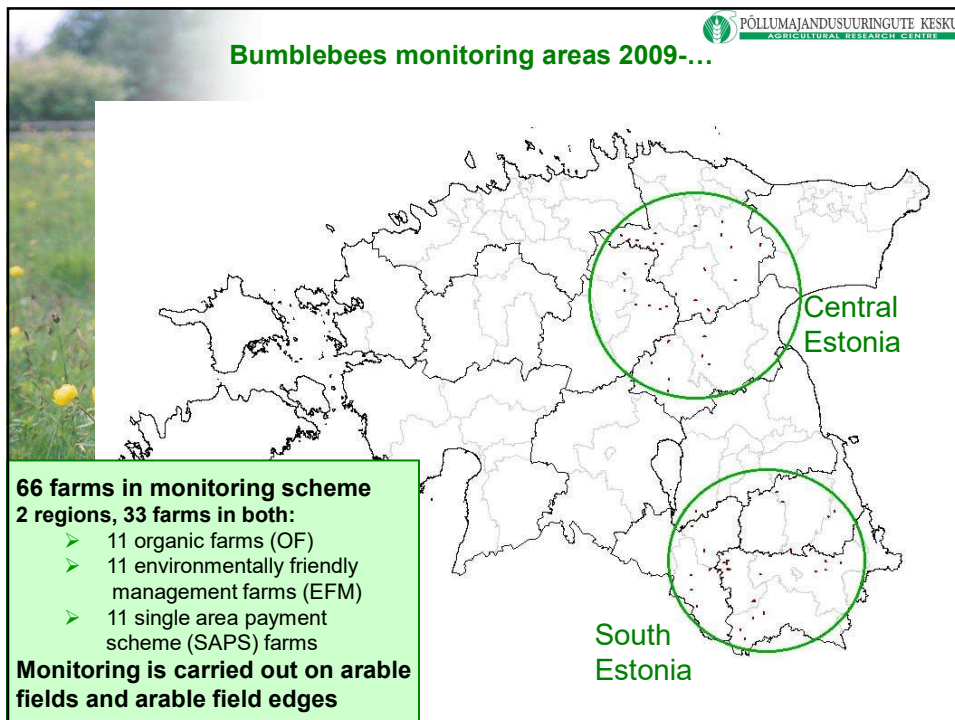
Bumblebees and farmland birds **monitoring since 2006**

- Started 2006 but presented results since 2009
- 66 monitoring farms each year
- Transect method (3 x June-August), transect width 2 m and length 500 m (400 m on field edges + 100 m on a field with entomophilous culture)
- Bumblebee abundance, species and flower density are noted down
- Field work: Estonian University of Life Sciences

Monitoring is carried out on arable fields and arable field edges

Bumblebees monitoring methodology





Summing-up

- Bumblebees:
 - Better in OF and EFM farms than in SAPS farms
 - OF and EFM farms have quite similar results
 - The highest flower cover in OF farms
- Bumblebees and farmland birds indicators show different results!
- In the future the data of the bumblebee monitoring are used for the bumblebee indicator in the development plan for agriculture and fishery up to 2030



Photo: Arne Ader

Thank you for attention!

