

## Session 3: Development of agroecological practices

Convenor: Paolo Barberi, Agroecology Europe, Scuola Superiore Sant'Anna, Italy

### Session talks:

- Srđan Šeremešić (University of Novi Sad, Serbia) – “Crop rotation nexus”
- Serena Magagnoli (University of Bologna, Italy) – “Influence of cover crop management techniques on soil ecosystem services”
- Chloé Salembier (INRA/ AgroParisTech, France) – “Outscaling innovative practices on farm: promising approaches to foster the design of agroecological farming systems”
- Antsa Rafenomanjato (Scuola Superiore Sant'Anna, Italy and CIRAD-SPAD, Madagascar) – “Malagasy farmers’ view on the use of *Stylosanthes guianensis* for weed management in no-till rain-fed rice cropping systems”
- F. Xavier Sans Serra (University of Barcelona, Spain) – “The role of agroecology in designing sustainable food systems: the experience of the periurban rural area of Gallecs (Barcelona, Catalonia)”

The presentations showed that we need to find concrete indicators to convey the importance of crop rotations for agroecological farming. The contributions of crop rotation are diverse and not always easy to distinguish e.g. from effects that climate has. As crop rotation is closely related to the soil, a new approach is needed that relates it to soil properties. Cover crop management is equally diverse and i.a. impacts pest pressure by providing habitat to natural enemies. There are several ways by which agronomists and farmers can interact for designing agroecological systems and outscaling innovative practices of farms is a promising approach. The example from Madagascar showed that the agroecological approach in weed control with a perennial legume as living mulch is successful both in reducing weeds as well as in increasing yields. On the other side farmers are also aware of the potential services that weeds can play in agroecological systems. The provision of agroecosystem services at field scale can be influenced by the larger landscape context and upscaling agroecology to the landscape level is possible through a multi-actor approach as demonstrated by the region of Gallecs in Catalonia.