

Atelier 2/ Workshop 2

➤ Biodiversité/Biodiversity

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Landscape management for functional biodiversity : The ecological compensation area towards functional biodiversity

Just as for other crops, the IOBC integrated production guidelines for viticulture contain the '5% rule', encouraging farmers to maintain a small part of their farm as an ecological compensation area. The aim of this rule is to maintain general biodiversity, a perfectly valid ecological and ethical reason. However such a 'naturalist' measure is difficult to accept for a farmer since he does not see a direct benefit.

Many other potential functionalities of such 'unproductive' areas are much more important to farmers. A certain area is always unproductive since it is necessary for farm infrastructure requirements. Other areas cannot be cultivated for other reasons such as the risk of erosion (steep slopes), or because they are safety zones necessary to avoid pesticide drift and runoff to waterways. The necessary management of such unproductive areas is often seen as an 'obligation' not providing any real benefits for the farmer.

However it is this farm management ('farmscaping'), together with all the other land use practices that will finally form the overall landscape, sometimes creating a certain conflict of interest between economic objectives and other goals such as nature conservation (biodiversity), eco-tourism or public image, urban development etc.

When farmers desire to implement IPM guidelines it seems of major importance to add other 'positive' reasons for farmscape management providing direct benefits to motivate the farmer. The possible use of these areas's for conservation biocontrol, stimulating the action of natural enemies on his crop might be such an additional motivation.

Alternatively: if we want to improve natural control of pests by landscape management we should be aware of the fact that this objective is only one of many involved in landscape management, and that other landscape users also contribute with sometimes different motivations.

First of all we still have to show clearly that conservation biocontrol does work. In spite of many positive results in existing situations, experimental evidence that we can 'make it work' by actively manipulating the landscape is still scarce, mainly because of the lack of knowledge on the scale at which might interact landscape, pest insects and their natural enemies. It is also very difficult to carry out large scale landscape experiments, and it might be interesting to see if this might be achieved in a combined research effort. Recent ecological research on species conservation could provide interesting approaches. It might be interesting to combine such large scale experiments with applied research on environmental impact (pesticide, fertilisers) etc.

When we would like to improve conservation biocontrol in viticulture, we have to take into account all the 'other' functionalities of landscape elements, both for the farmer and for other users, focussing specifically on their interactions and the (im)possibilities to combine them. Many excellent idea's on ecological infrastructures have been compiled recently in the IOBC ideabook on ecological infrastructures (Boller et al., 2004), we should now start to 'integrate' these idea's, taking in account other landscape functionalities into practical advice for landscape management that will undoubtedly go beyond farm level. This might be another collaborative project.