

Credit points for diversity on farmland

Farmers measure biodiversity

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To measure species diversity on an agricultural holding directly would require great effort. Therefore, a project was set out to develop an evaluation system that assigns specific credit points to a variety of habitat characteristics and management options. This provides a proxy for all efforts undertaken on a farm to maintain and enhance biodiversity.

The Swiss Ornithological Institute and FiBL are currently developing new instruments to encourage farmers to engage in promoting biodiversity on their land. Our project entitled “Scoring with biodiversity – farmers enrich nature” started off by developing a credit point system which evaluates the efforts made by farmers to promote biodiversity. The system is based on both scientific knowledge and practical experience. It evaluates the quantity, ecological quality, structural diversity and spatial distribution of ecological compensation areas as well as the application of arable and grassland options (e.g. no herbicide application, staggered mowing etc.) and conservation of genetic diversity (heritage breeds) (Jenny et al. 2013).

A richly illustrated handbook helps farmers to correctly complete the forms for the credit point system (Jenny et al. 2011). It also explains the significance of the individual measures in accessible language. The system is designed in such a way that participants only need to enter their data. For each of the 32 measures the credit points are then calculated automatically. The overall point score is an indication of the overall contribution made by a farm holding; the system thus also allows for self-assessment. At the same time, possible further ecological improvements are outlined. For example, experts defined minimum targets for each of the measures. If a holding’s score is well below the target value, action may be warranted.

The experience has shown that farmers are open to enhancement measures and that farm conservation advisory services play a key role in this respect (Chévilat et al. 2012). However, it is a prerequisite that farmers are made familiar with the eco-



Lukas Pfiffner, agro-ecologist at FiBL, explains the results of the “Scoring with biodiversity” project to farmers. Photo credit: Markus Jenny

logical requirements of individual indicator species (plants or animals) on their holding. A supplementary tool was developed that helps farmers in identifying indicator species potentially present on their land. Again the farmer only needs to enter some key farm data (location, existing habitats) in order to generate a list of indicator species. In addition, simple information cards were produced for 115 indicator species (Graf et al. 2010). These selected species are widespread in Switzerland and, taken together, represent all the farmland habitats and habitat elements of conservation importance. Using these cards, farmers can easily and on their own, access information on the biology, distribution and ecological needs of the indicator species characteristic of their land. A study on 133 farms assessed how far the credit point system actually reflects the diversity of representative groups of organisms (birds, butterflies, grasshoppers, vascular plants) at the individual farm level. 19 biodiversity indicators were defined for this assessment, e.g. the richness of plant species. The evaluation has shown that, for example, an increase of the point score from 10 to 20 goes hand in hand with an

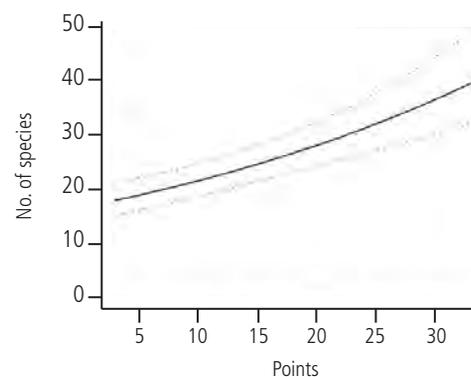
average increase of plant species diversity by 30% (see Figure). The credit points are therefore a suitable measure of a farmer’s effort for biodiversity conservation and enhancement. Other detailed assessments are underway and will contribute to further improvements in evaluating individual measures. It is encouraging to see that instruments and measures for the assessment of farmers’ contributions to biodiversity conservation and enhancement as part of the agriculture section of the Swiss Biodiversity Action Plan have enjoyed widespread acceptance and that they have been shown to hold great potential as supplementary agri-policy measures.

References

biodiversity.ch/index.en.php > Publications

Further Information

<http://www.vogelwarte.ch/scoring-with-biodiversity-farmers-enrich-nature.html>
www.fibl.org > Themen > Biodiversität > Mit Vielfalt punkten (in German)



Correlation between point score and plant species diversity. If the point score increases from 10 to 20, an average increase of plant species diversity by 30% can be expected. Source: FiBL and Swiss Ornithological Institute, Sempach