

On-farm monitoring of agroforestry innovations

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Why to monitor?

Agroforestry systems provide ecological and economic benefits. Whether these benefits can be effectively realized or whether they are offset by possible drawbacks such as more complicated farm management, long term tying-up of land, etc. can only be tested using empirical data from real farms.

A monitoring framework was therefore developed with indicators relating to productivity, economic viability, management strategies, environmental factors and the perception of those working the land. At the same time it should allow the parameterization of bio-physical and economic agroforestry models.

Three agroforestry plots of pioneer farmers



Asphof: Poplars for energy and fodder cereals for cattle.



Beckenhof: Apple trees for fruit with strawberry, wheat and flower strips.



Eulenhof: Cherry trees for fruit with organic vegetables.

Kuster M., Herzog F., Rehnus M., Sorg J.-P. (2012) Innovative Agroforstsysteme - On farm monitoring von Chancen und Grenzen. *Agrarforschung Schweiz* 3(10), 470 – 477.
Kuster M., Herzog F., Rehnus M., Sorg J.-P. (2012) Systèmes agroforestiers novateurs - monitoring des opportunités et limites. *Recherche Agronomique Suisse* 3(10), 470 – 477

Implementation and outlook

The monitoring on three agroforestry plots in Switzerland started in 2011 and has since then been continued with an effort of 0.5 labour days per year and plot, including the data recorded by the farmer.

From 2014 onwards, it will be continuously extended to cover 25 agroforestry plots of pioneer farmers:

www.agroforst.ch / www.agroforesterie.ch

As the farmers, also the scientists need to be patient: It will take decades for the data to actually become valuable and reflect the increasing interaction between trees and crops.

Figure 1: Hierarchical structure of the monitoring tool

