

Press release, 13 December 2016

Presentation of the SFIAR Research Awards 2016

One pea for more maize in Malawi

Gina Garland of ETH Zurich has demonstrated the potential of pigeon pea – for improving the soils in Malawi, for increasing maize yields and as a valuable source of protein. For her work she will be presented with this year’s research award of the Swiss Forum for International Agricultural Research (SFIAR). The SFIAR will also honour Fritzi Hartung-Hofmann for her master’s thesis submitted to the University of Bern on the consequences of out-migration in a rural area of Nepal.

Improving soil fertility in Malawi

In the highly-weathered soils of Malawi, phosphorus is often the main factor limiting crop production. The soils bind a big part of the available phosphorus so that little is left for the plants. This results in low yields for example of maize, the dominant agricultural crop and staple food of the country.

Farmers could increase phosphorous content by applying mineral fertilizers but these are often too costly. The application of organic soil amendments such as manure and plant residues is no option as they are used as fuel and fodder. Gina Garland has investigated an alternative solution: Intercropping maize with pigeon pea. It is known that an increase in crop biodiversity can improve soil structure. Pigeon pea is rich in nutrients and well adapted to the climate of East Africa. Moreover this crop can fix nitrogen in the soil and some studies indicate that it has a positive impact on phosphorus dynamics in the soil.

Gina Garland’s field trials in Malawi and controlled greenhouse trials at ETH Zurich have shown that maize-pigeon pea intercropping has big potential: Already after one growing season Garland could observe an improvement of soil structure as well as higher concentrations of phosphorus, nitrogen and carbon in the soil. Although this has not yet translated into higher maize yields, higher nitrogen levels in the maize plants indicate that yields will be higher in the following seasons. Besides the potential of pigeon pea as a “natural fertilizer” this legume can enrich the nutrition of the local population thanks to its high protein content.

Gina Garland plans to continue her research in Malawi in order to investigate longer-term effects of intercropping and to discuss her insights with local farmers.

Reacting to the consequences of out-migration in rural Nepal

The SFIAR Master Thesis Award goes to Fritzi Hartung-Hofmann, a graduate of the Institute of Geography of the University of Bern. She analyzed the consequences of out-migration in a mountainous region of Nepal. On the basis of satellite images and aerial photographs – combined with information from the local population – she looked closely at land use.

It appears that the remaining households have given up cultivation of many terraced lands. Because these lands had been overgrown with forests, the expected soil erosion and landslides did not happen. But Hartung noted that in the valley area, land use has significantly increased. People moved to these areas where they can profit from better access to markets and better infrastructure. This trend has increased the pressure on natural resources in the valley area and in many places livelihoods are threatened by flooding and land erosion. The insight that problems do not primarily lie in the mountainous regions but rather in the valley area is very helpful for future land use planning and risk prevention.

Awards ceremony

Gina Garland receives the SFIAR PhD/Post-Doc Award endowed with CHF5,000 and Fritzi Hartung-Hofmann receives the SFIAR Master Thesis Award endowed with CHF1,000. SFIAR

Swiss Forum for International Agricultural Research (SFIAR)
c/o HAFL, Länggasse 85, 3052 Zollikofen, Switzerland

Tel. +41 (0)31 910 21 91 Fax. +41 (0)31 910 22 99
info@sfiar.ch , www.sfiar.ch

president Beate Huber (FiBL) will present the awards on Thursday 15 December 2016 (16:15-18:30) at ETH Zurich in the context of a public event entitled *"Innovation for a Better Life - Linking Agricultural Research to Results in the Field"*.

SFIAR Research Awards

Numerous Swiss institutions are engaged in agricultural research for development. With the aim of supporting this research effort, the Swiss Forum for International Agricultural Research (SFIAR) has been honouring innovative Swiss projects with annual awards since 2008. The award is sponsored by the Swiss Agency for Development and Cooperation (SDC) and the Syngenta Foundation for Sustainable Agriculture.

Further information about the projects together with photos can be found at www.sfiar.ch/award.

Contacts for members of the media

SFIAR Secretariat
Felix Hintermann
Tel. 031 910 21 91
E-Mail: felix.hintermann@bfh.ch

Gina Garland
Tel.: 052 354 91 26
E-Mail: gina.garland@usys.ethz.ch

Fritzi Hartung-Hofmann
Tel.: 079 363 34 83
E-Mail: fritzi.h.h@gmx.de