

## Opportunities for organic farming research in Southeast Asia

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*In Southeast Asia, there is a growing interest in organic production and certification of vegetables to provide local markets with safer products. Together with the Centre for Agricultural Research and Ecological Studies (CARES) and the UN Food and Agriculture Organisation (FAO), FiBL Switzerland started in 2022 to implement a project related to organic vegetables in Vietnam – the Agro-econvert project. Also, the growing organic sector in Thailand offers interesting opportunities for collaborative research.*



Organic farm visit in northern Thailand to learn about ecological intensification strategies. (Photo: FiBL, Christian Grovermann)

FiBL researcher Christian Grovermann has spent three months as a visiting scientist at the Southeast Asia office of the World Vegetable Center (WorldVeg) in Thailand in order to intensify collaborations between FiBL and agricultural research organisations in the Mekong region. There is a high potential for partnerships with the FAO and WorldVeg regional offices, the Highland Research and Development Institute (HRDI) and Kasetsart University (KU) in Thailand as well as CARES in Vietnam.

## Pesticide-intensive agriculture in Southeast Asia

Across Southeast Asia, the use of agrochemicals has increased to very high levels, with serious implications for food safety and the health of farm families and ecosystems. Problems are particularly serious in high-value crops such as fruits and vegetables. Studies have shown that 75 % of pesticides used in vegetable production in Southeast Asia exceed the economic optimum. In response to the chronic over- and misuse of pesticides in agriculture, governments in the region have sought to improve food safety by introducing and promoting standards of good agricultural practices and organic agriculture.

## Participatory guarantee system as a solution

The goal of the Agro-econvert project is to investigate and strengthen a particular form of organic certification, called participatory guarantee system (PGS). In this system, accreditation and monitoring are managed by farmer groups in

consultation with retailers and NGOs. PGS Vietnam has been around since 2008. It currently faces the challenge of maintaining and increasing farmers' participation levels. 170 vegetable farmers are currently certified by PGS Vietnam.

Among a range of research and stakeholder activities, the Agro-econvert project is seeking to evaluate the effectiveness of the standard through a systematic impact evaluation, based on a structured farm survey. Results show that PGS farmer do not use any chemical pesticides or fertilisers, but rather rely on a variety of agroecological practices, such as rotations, mulching or push-pull (see link below) for example. The impact evaluation shows that organic PGS certification can deliver economic, environmental and social benefits. While the impacts of PGS on agroecology uptake and performance are clearly positive across all indicators, economic results are more mixed. Crop profits were positively affected by participation in the PGS scheme, increasing by over 100 %. Nevertheless, a substantial yield decrease of over 30 % and a slight reduction in terms of return to labour also challenge the economic viability as well as the scalability of current PGS-certified vegetable production in northern Vietnam.

## Goal for the future: narrow the yield gap

For FiBL and its partners, it will be important to work towards solutions that can help narrow the yield gap and save labour in organic vegetable systems in Southeast Asia. During a study visit to two organic vegetable sites managed by HRDI and the Royal Project in northern Thailand, it became evident that organic vegetable production with good productivity and return on labour require innovations for ecological intensification: seed selection for organic conditions, production of high-quality seedlings for transplanting and continuous soil amendments from compost, manure and fermented crop residues. Anecdotal evidence from farmers in the sites of HRDI and the Royal Project suggests comparable yields between organic and conventional for leafy vegetables, with labour not being a major constraint. This suggests a great potential for further developing and promoting organic vegetable production more widely across the region.

## Further information

### Contact

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### Links

- › [fiBL.org](#): Project "[Agro-econvert](#)" in the FiBL project database
- › [avrdc.org](#): [Website of World Vegetable Center](#)
- › [push-pull.net](#): [Information about push-pull](#)

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