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Nextfood - Educating the next generation of professionals in the agrifood system

Practice Abstract #32: Integrating systems thinking into farmer courses

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The target students, in the 3-month certificate course in Agroecology at the University of Calcutta, are farmer trainers and extension workers. The backbone of the course is to understand the social, economical and ecological challenges faced by small holder farmers and looking for options to address those challenges.

Facing the difficulty of a reductionist approach to resolve the various systemic challenges of food and farm systems, in the design of the course, we have tried to create a systems model for the concept of agroecology among farmers thereby integrating systems thinking into the course. We are exploring various key conceptual successions to explain the root of agroecology, clarifying the few conceptual areas of various spectrum of the agrifood system and highlighting the limitations of conventional agricultural farming and food system. The students are exposed to various accumulated and then synthesized aspects of agroecology. Finally, systems thinking is applied to develop a more comprehensive model of farm systems to promote the understanding and application of agroecology.

Main practical recommendations for integrating systems thinking into farmer courses:

- The agri food system has a nested hierarchy. Each part of the system has on its own but when it meets with others it becomes part of the system.
- Each system is interconnected to form a bigger suprasystem.
- The environmental, social, and economic systems are closely linked, interacting and sometimes overlapping.
- Integration of environmental, social and economic systems are important to improve the quality of life.