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The Pros and Cons of Conservation Agriculture (CA) adoption by smallholder. Illustrations from Madagascar.

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CA is implemented In Africa since 15 years but many farmers seem to have adopted partially CA technologies (Corbeels et al, 2011). CA adoption is a real change of paradigm though the adoption of the 3 main principles on one side (no tillage, associated plant and mulch, rotation) and a move to a mid- term cropping strategy on the other side. The pros and cons of CA adoption could be seen through opportunities for farmers to improve their cropping systems, partially or even through complete adoption of the proposed technologies and through various constraints that limit interest and incentive to adopt CA. The expected output of CA adoption is sustainable rainfed agriculture. Yield improvement is expected from various patterns of ecological intensification. As most farmers do adopt and appropriate CA partially, the output is more the development of some agro-ecological practices that fit farmers' situation and particular constraints. What is the impact on farmers' income?

The causes of abandon are reviewed. The evolution of CA cropping systems is monitored with the example of Madagascar. If CA technologies might appear as relatively complex requiring 5 to 7 years of learning process, most constraints are social or economic. Therefore, if CA appears for researchers, developers and donors as a real potential solution for developing a sustainable agriculture, does it really fit farmers' strategies and constraints? Is CA adoptable on very large scale with universal message? What could be the extension patterns adapted for CA adoption?

We will illustrate CA constraints to adoption with the case of Madagascar (lake Alaotra area and Middle West area of Vakinankaratra).