Breaking open the black box: the socioeconomic factors explaining adoption or rejection of innovations in agroforestry

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The low rate of technology adoption has long been a key constraint on improving productivity, income and yields in farming, particularly in developing countries where market-based systems of production are not well developed, the subsistence economy remains strong, land is under communal tenure and family labour is the backbone of production. We examine four case studies of innovation to explore key socio-economic factors facilitating or constraining adoption: 1. new replanting program for oil palm smallholders in PNG, 2. new selected oil palm planting materials in Cameroon small holdings, 3. Cocoa Pod Borer control methods in PNG, and 4. high yielding planting materials amongst cocoa growers in PNG. We assess the propensity to adopt along a number of socioeconomic dimensions including intra-household relations, particularly gender relations; tensions between modern and traditional farming practices in terms of labour mobilisation, land tenure and the indigenous values underpinning production, consumption and distribution. The barriers to technology adoption and innovation are not simply technical and nor are they because smallholders lack the relevant knowledge and information to facilitate adoption. Rather, proposed technologies and innovations are often incompatible with indigenous values, habits, and socio-cultural institutions that can make adoption difficult for farmers. Improving adoption rates requires a closer alignment with indigenous social institutions and values.

Fig 1: Only those smallholders receiving permanent technical assistance and support from project or agro-industries succeeded in adopting selected oil palm tenera types. Before plantation oil palm development, family farms used their own planting material from local dura type oil palms. Many smallholders were not aware that to participate fully in the new oil palm developments they had to purchase selected seeds from selected seeds suppliers.

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