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Abstract :

There is a resurgent interest in agricultural input subsidies as instruments to increase adoption of new technologies in developing countries. But what is the impact of such technologies on households' decisions on the use of other inputs? Using unique experimental data from Equateur province in DRC, characterized by a large heterogeneity in access to land and home to the second largest tropical forest, we study the implications of such interventions for households' agricultural decisions related to labor and land use. High subsidy levels increase adoption of improved seeds, in particular when other access constraints were also relieved, providing exogenous variation to analyse its impact on the crowding in of other inputs. Results show that households reallocate their labor inputs by organizing collectively into labor-sharing groups, and re-optimize their use of complementary land inputs by using more land cleared in forest. The evidence further suggests that general equilibrium effects may also contribute to the shift in land and labor input, through increased competition for land and incentives to solve collective action problems. Overall, access to improved seeds appears to be welfare enhancing with positive impacts on food security and food diversity. Hence the complementarities between new technologies and land fertility imply that policies aimed at increasing agricultural productivity may come at the cost of increased deforestation.