

## Conservation agriculture for smallholder farms in eastern Uganda and western Kenya

Soil quality and crop yield parameters resulting from conservation agriculture practices were evaluated in on-station and on-farm studies established in two highland sites and two lowland sites in the Mount Elgon region of western Kenya and eastern Uganda. Each of the four study areas consists of an on-station and four on-farm sites, each with of three tillage practices (conventional moldboard, no-till, and minimum till); two levels of nitrogen fertilizer (60 Kg N Ha<sup>-1</sup> and none); and three cropping systems (traditional maize-beans intercropping, maize intercropped with a bean-Mucuna [*Mucuna pruriens*] relay, and strip intercropping with maize, beans, and Mucuna in rotation planted in four-row strips) in a factorial design with nine treatments. First and second year results of soil organic matter analyses and crop yields indicate that reduced tillage combined with adding the cover crop to the rotation has begun to improve soil quality and has not negatively impacted yields. Some cooperating farmers have noted improved maize yields following Mucuna and are eager to scale up reduced-tillage and cover crop treatments.