

Abstract

Rampant increase and diversification of synthetic pesticides poses health, environmental, and livelihood risks especially to smallholder farmers who dominate agriculture in sub-Saharan Africa. Legal mechanisms for regulating pesticides, although important, have not fully addressed the dangers of ecological services disruptions due to accumulation of different pesticides over time. Legal mechanisms also are not well suited to developing countries because of weak monitoring and enforcement capacity. Understanding the role of other accountability mechanisms in farming, driven by norm leaders in the community, is thus of paramount importance. We investigated the effectiveness of a traditional accountability mechanism, i.e., local councils of elders known as the Njuri Ncheke, in controlling pesticide use in khat (*Catha edulis*). Khat samples were taken from traditional production systems in which these councils have influence and from commercial production systems lacking the councils' influence. The samples were analyzed for pesticide residues using liquid chromatography mass spectrometry. Individual farmer interviews were also carried out, inquiring about the influence of the Njuri Ncheke on the local community and on pesticide use in crop production. Our results show that a variety of agrochemical pesticides are being used by smallholder khat farmers and that local Njuri Ncheke councils have had success in limiting pesticide use, arguably more success than any government agency working to control pesticides on any local crop. These results show the potential of public accountability through traditional institutions like councils of elders and the role they can play in complimenting legal regulation mechanisms for successful pesticides management in agroecosystems.