Weeding out striga from African drylands

A striga workshop organised by the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) gathered experts from Europe, USA, Africa and Asia for two days (28-29 November 2017) in Nairobi to discuss viable and scalable options for eradicating this weed that has plagued sub-Saharan African agriculture for decades. From soil fertility management, push-pull intercropping, seed treatment to crop improvement, solutions exist but progress on the ground has been modest so far. The striga specialists are calling to form an Alliance for Striga Control in Africa to reclaim the much needed food potential of millions hectares of striga infested fields.

Despite its striking purple flowers and potential medicinal uses, the parasitic nutrient sap sucking striga weed or witchweed is no innocent pest. A lasting and very damaging weed for the major cereal crops in sub-Saharan Africa, it can cause up to 100% crop losses across millions of hectares of farmland and an annual loss of several billion dollars.

Once the field is infected with striga, farmers can't get rid of this pest easily. Like black dust, these tiny seeds produced in large quantities – one spikelet can produce over 50,000 seeds - spread rapidly within the farming community. The seeds can remain viable for up to 20 years under the right conditions until a host plant, usually a cereal crop like rice, maize, sorghum or millet, emits germination signal molecules called strigolactones at the root zone. The invisible pest develops underground, sucking life from the host root. After a month when it appears over ground, it is almost too late.

Knowing your enemy

Researchers and practitioners have been on the case for decades, yet paradoxically, we still don’t know enough about the extent and intensity of striga invasion, judging by the differences in the figures on damage impact circulated by different scientists during the workshop. And although striga biology is now understood up to the molecular level, some practical aspects are not necessarily grasped by smallholder farmers. A young farmer who had just inherited a pristine plot of land borrowed ploughing equipment used in his father's striga-contaminated fields and ended up spreading the weed in one season.