PEST MANAGEMENT DECISION GUIDE: GREEN AND YELLOW LIST

Striga Weed in Maize

Striga hermonthica

Purple witchweed infestation © USDA-APHIS-PPQ, Bugwood.org

Purple witchweed on maize © USDA-APHIS-PPQ, Bugwood.org

Prevention

- Use certified clean seed to reduce the chance of contamination
- Prevent seed introduction through water runoff from infested fields by soil bunding
- Do not allow livestock into striga infested areas because they spread the seed
- Clean field equipment or tools and vehicles to remove any striga seed after working in striga infested areas
- Plant Imazapyr coated maize to kill striga weed before it causes any damage and the residual herbicide will kill the striga seeds

Monitoring

- Annual, broadleaved, parasitic herb (30-100cm high); erect, sometimes creeping. Always associated with host in the grass family. Stems are four-sided, branched or unbranched with rough hairs and opposite leaves. Leaves green (2-8cm long), narrow, sparsely covered in rough hairs. Flowers bright pink, rose-red and/or white (1cm long), arranged in spikes (6-10 flowers per spike)
- Look for yellowish blotches in crop foliage about 1 cm long by 0.5 cm wide or stunted crop growth, even if the weed has not emerged. Uprooting may confirm the presence of young parasite seedlings on the roots
- Check every two weeks for flowering and seed development to prevent seed set, spread and build up of seed bank in the field
- Crop rotation with non-hosts, i.e. broadleaf crops such as beans

Direct Control

- Light infestations can usually be controlled by hand pulling or hoeing before flowering and seed set
- Crop rotation with trap-crops (those that stimulate seed germination but do not host the parasite) such as cotton or catch-crops (susceptible crops that are harvested before striga seed is produced) for 3 or more years will deplete the striga seed bank
- Mechanical methods like hand pulling and hoeing are not generally satisfactory as Striga plants regrow
- Improved soil fertility is a vital key to long-term control, whether by organic, inorganic or green manuring, rotation with legumes, or agroforestry techniques involving mulching
- Allow land to lay fallow for several years

Direct Control / Restrictions

Direct Control	Restrictions
• Use of chemical herbicides may lead to the development of herbicide resistance.	
• When using a pesticide, always wear protective clothing and follow the instructions on the product label, such as dosage, timing of application, and pre-harvest interval.	
• 2,4-D (720g per Litre of active ingredient per hectare) may be used to kill emerged striga or to prevent it from maturing and setting seed in sole-crop cereals. Triclopyr	• 2,4-D AND Tryclopyr: WHO class II (moderately hazardous)
• Pre-emergence treatment with chlorsulfuron (750g per litre of active ingredient per hectare) and other sulfonylurea (1 to 150 g of active ingredient per hectare) herbicides has proved selective in sorghum and maize	• Chlorsulfuron and other sulfonylurea: WHO Class U (unlikely to present an acute hazard in normal use)
• Imazapyr (250g per litre of active ingredient per hectare)	• WHO class U (unlikely to present an acute hazard in normal use)

Uganda

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