

Common Weed Species and their Chemical Control in Conservation Agriculture (CA) Systems

Common weed species in CA systems

Dominant weed species in smallholder farming systems are broadleaved annuals and perennials, and grasses. The most common and difficult to control broadleaved weed species on smallholder farms are *Commelina benghalensis* (Wandering dew), *Ricardia scabra* (Mexican clover), *Cyperus esculentis* (Yellow nutsedge), *Cyperus rotundus* (Purple nutsedge) and *Striga asiatica* (Witchweed). The common grasses on smallholder farms are *Eleusine indica* (Rapoko grass) and *Cynodon dactylon* (Couch grass). These weed species are found in all agro-ecological regions of Zimbabwe and other southern African countries.



Photos: Walter Mupangwa

High infestations of *Commelina* and *Striga* are common on farmers' fields

Herbicides available for controlling weeds in cereal crops

Herbicide	Time of application	Crops	Weed species controlled
Round Up (<i>Glyphosate</i>)	Pre-emergence*	Maize, sorghum, millet, wheat, rice, barley	Broad leaved, annual and perennial grasses, sedges
Atrazine (<i>Aatrex</i>)	Pre-emergence, post emergence*	Maize, sorghum, millet, rice, sugarcane	Broad leaved, annual and perennial grasses
Paraquat (<i>Gramoxone</i>)	Post emergence	Maize, sorghum, millet, wheat, rice	Broad leaved, annual grasses
Dual (<i>Metolachlor</i>)	Pre-emergence	Maize, sorghum, millet, wheat, rice, barley, sugarcane	Annual grasses, sedges, some broad leaved
Basagran (<i>Bentazon</i>)	Post emergence	Maize, sorghum, millet, rice	Broad leaved, yellow nutsedge
Accent (<i>Nicosulfuron</i>)	Post emergence	Maize only	Annual and perennial grasses
Harness (<i>Acetochlor</i>)	Pre-emergence	Maize only	Annual grasses
Bullet (<i>Alachlor</i>)	Pre-emergence	Maize, sorghum, millet	Broad leaved, annual and perennial grasses

Herbicides available for controlling weeds in legumes and other crops

Herbicide	Time of application	Crops	Weed species controlled
Agil (<i>Propaquizafop</i>)	Post emergence*	Soyabeans, sugarbeans, cowpeas, groundnuts, cotton, tobacco	Annual and perennial grasses
Round Up (<i>Glyphosate</i>)	Pre-emergence*	Soyabeans, sugarbeans, cowpeas, groundnuts, cotton, tobacco, sunflower	Broad leaved, annual and perennial grasses, sedges
Paraquat (<i>Gramoxone</i>)	Post emergence	Soyabeans, sugarbeans, cowpeas, groundnuts, cotton, tobacco, sunflower	Broad leaved, annual grasses
Dual (<i>Metolachlor</i>)	Pre-emergence	Soyabeans, sugarbeans, cowpeas, groundnuts, cotton, tobacco	Annual grasses, sedges, some broad leaved
Basagran (<i>Bentazon</i>)	Post emergence	Soyabeans, sugarbeans, cowpeas, groundnuts	Broad leaved, yellow nutsedge

* refers to emergence of the crop

Hints when using herbicides

- Know your weeds and the appropriate herbicides
- Decide your crop rotations/associations
- Know your soil type before using herbicides
- Know the calibration and operation procedures of spraying equipment
- Read and understand the labels on containers of selected herbicide for application rate information and rainfall intervals
- Avoid spraying overgrown weeds - it wastes money. Apply herbicide to actively growing weed plants
- Use herbicides for the recommended crops only
- Do not mix different herbicides for control of common weed species without consulting your Extension Officer/Agronomist
- Consult the Extension Officer when you are not sure



Photo: Walter Mupangwa

Checking spraying equipment before herbicide application is critical



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