ITCH GRASS

ROTTBOELLIA COCHINCHINENSIS

Sugar Research Australia

INTRODUCTION

Itch grass is believed to be native of tropical Asia and Africa. This invasive cosmopolitan plant competes with many types of crops in tropical regions of America, Africa, Asia and Oceania.

DESCRIPTION

Itch grass can grow up to 4m tall. It has cylindrical hollow stems branching at the upper nodes. Its leaves are flat, 5-20 mm wide, with a conspicuous pale mid-vein. Stem and leaves are covered in stiff hairs that can cause painful skin irritations. Characteristic prop roots grow at the base of the stem. Flower heads branching from the upper nodes form 100-150 mm long green spikes. As the spikes mature, the cylindrical rice-size spikelets containing the seeds progressively break free and fall to the ground. Each plant produces 2,000-16,000 seeds that can remain dormant for 5-7 months after maturity and are viable for 3 to 5 years.

DISTRIBUTION

Itch grass is one of the many weeds that can be found in cane fields from Central Queensland to the Far North, particularly in the Burdekin and Cairns regions.

It has been identified as one of the 12 worst weeds of sugarcane by the Global Invasive Species Database (2020). Due to its large size, itch grass will compete with crops for light, water and nutrients. There are estimates of losses in sugarcane of between 20-70% in Argentina, Cuba, India, Mauritius, Trinidad, and the USA. Itch grass is spread by seeds carried by birds, flood water, rodents and farm machinery.

CHEMICAL CONTROL

Diuron mixed with hexazinone is the only pre-emergent herbicide for sugarcane in Australia that includes itch grass on its label. However, in pot trials carried out by SRA, several other herbicides registered in sugarcane to control other weeds were also found effective against itch grass. Table 1 displays the efficacy of herbicides and herbicide mixtures as found in the pot trials. Within each season, several flushes of itch grass can emerge, especially after soil disturbance or when there are light gaps in the canopy or mulch. This staggered germination will challenge even effective pre-emergent herbicides and further control may be needed (additional pre-emergent herbicide, post-emergent herbicide or physical control). Refer to the product label to understand the conditions of use and prevent crop damage.

Table 1 Pre-emergent herbicide treatments efficacy in controlling itch grass in pot trials.

ACTIVE INGREDIENT	COMMERCIAL NAME AND RATE	EFFICACY
diuron, hexazinone	4kg/ha Barrage	>99%
imazapic, hexazinone	0.63kg/ha Bobcat® i-MAXX SG	>99%
isoxaflutole + hexazinone	0.1kg/ha Balance®750WG + 2L/ha AC Tressel	>99%
imazapic + amicarbazone	0.2L/ha Spark® + 1kg/ha Amitron®	>99%
isoxaflutole + diuron	0.2kg/ha Balance®750WG + 0.5kg/ha Diuron 900	>99%
flumioxazin	0.7kg/ha Valor®	>99%
isoxaflutole + amicarbazone	0.2kg/ha Balance®750WG + 1kg/ha Amitron®	99%
imazapic + isoxaflutole	0.2L/ha Spark® + 0.1kg/ha Balance® 750WG	97%
diuron	1.9kg/ha Diuron 900	97%
trifluralin	3L/ha Treflan®	96%
amicarbazone	1kg/ha Amitron®	93%
isoxaflutole + metribuzin	0.2kg/ha Balance®750WG + 2kg/ha Mentor®	90%
imazapic	0.4 L/ha Spark®	89%
imazapic + diuron	0.4 L/ha Spark® + 0.5kg/ha Diuron 900	80%
isoxaflutole	0.2 kg/ha Balance®750WG	74%
pendimethalin	3.3L /ha Stomp®Xtra	47%
metribuzin	2 kg/ha Mentor®	22%
S-metolachlor	2.5L/ha Dual Gold®	20%

SRA pot trial screening pre-emergent herbicides efficacy to control itch grass.

CHEMICAL CONTROL WITH POST-EMERGENT HERBICIDES

Post-emergent herbicides asulam or MSMA are recommended for knockdown control of itch grass by the manufacturer labels. Additional spray options were explored by SRA in two pot trials to control small (0.2 m tall) and mature (0.9 m tall) itch grass. Table 2 displays herbicide combinations performance on small itch grass and Table 3 displays herbicide combinations performance on mature itch grass.

Refer to the product label to understand the conditions of use and reduce crop damage.

Table 2 Efficacy of herbicide treatments applied as post emergent on small itch grass ~0.2 m (Results from one pot trial)

ACTIVE INGREDIENT	COMMERCIAL NAME AND RATE	EFFICACY ON SMALL ITCH GRASS
glufosinate	3 L/ha Basta®	100%
asulox	8.5 L/ha Rattler®	100%
MSMA	1.6 L/ha Gauntlet®	96%
S-metolachlor + asulam	1.8 L/ha Dual Gold®, 4 L/ha Rattler®	96%
isoxaflutole + hexazinone	0.3 L/ha Balance®flow, 2L /ha AC Tressel	96%
asulam + MSMA	4 L/ha Rattler®, 1.6 L/ha Gauntlet®	93%
amicarbazone	1 kg/ha Amitron®	56%
imazapic	0.4 L/ha Blaze	52%
imazapic + hexazinone	0.63 kg Bobcat® i-MAXX	37%

Table 3 Efficacy of herbicide treatments applied as post emergent on mature itch grass ~0.9 m in sugarcane (Results from one pot trial)

ACTIVE INGREDIENT	COMMERCIAL NAME AND RATE	EFFICACY ON MATURE ITCH GRASS
paraquat	1.2 L/ha Paraquat 330	100%
amicarbazone + paraquat	0.5 kg/ha Amitron® + 0.9 L/ha Paraquat 330	99%
glufosinate	3 L/ha Basta®	99%
metribuzin + paraquat	1 kg/ha Mentor® + 0.9 L/ha Paraquat 330	98%
asulam + MSMA	4 L/ha Rattler® + 3.3 L/ha Daconate®	98%
paraquat	0.9 L/ha Paraquat 330	94%
amicarbazone	1 kg/ha Amitron®	71%
ametryn	2.8 kg/ha Ametrex®	64%
metribuzin + asulam	1 kg/ha Mentor® + 4 L/ha Rattler®	61%
ametryn + asulam	1.4 kg/ha Ametrex® + 4 L/ha Rattler®	55%
asulam + diuron	4L/ha Rattler® + 0.5 kg/ha Diuron 900	53%
asulam	8.5 L/ha Rattler®	49%
amitron + asulam	0.5 kg/ha Amitron® + 4 L/ha Rattler®	48%
metribuzin	2 kg/ha Mentor®	47%

Efficacy in the tables is expressed in biomass reduction compared to untreated control.

SRA pot trial screening post-emergent herbicides efficacy to control itch grass.

Itch grass seed heads. Credits: Blue bottle CC by SA Pl@ntnet.

REFERENCES

Fillols, 2026 Pre-emergent control of itch grass, ASSCT proceedings (to be published).

Itch grass factsheet, Reef catchment. https://reefcatchments.com.au/itch-grass/