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Post-emergency broadleaf weed control in dichondra turf

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Key words : dichondra repens ,broadleaf weeds ,herbicide ,control

Introduction Chemical control broadleaf weeds and sedge is still a difficult problem because they are similitude in configuration after post-emergency . The object of this experiment is to screening a excellent herbicide for postemergence weeds control in dichondra .

Material and methods Investigation has been conducted twice per year for summer weeds and winter weeds . And 24% Oxyfluorfen emulsion , 10% Glyphosate aqua , 10% Bensulfuron wettability powder , 10% Methsulfuron-methyl wettability powder , 48% Bentazone aqua , 25% Shibagen wettability powder were applied in 2-5 leaf stage of weeds . Each plot was divided into 5m² for random block arrangement , repeated 3 times , and was treat with different hericides for different dose , a non-application treatment as check .

Result The finding of weed investigation indicated that weeds species were over 60 , and common weed species were over 20 . *Alternanthera philoxeroides* , *Hydrocotyle sibthorpioides* , *Oxalis corniculata* , *Euphorbia supina* , *Lobelia chinensi* , *Centipeda minima* , *Sagina japonica* , *Conyza canadensis* , *Erigeron annuus* , *Cerastium caespitosum* , *Veronica persica* made heavy damage to lawn .

All applications control broadleaf weeds effectively 20 Days after Treatment (DATs) . Thereinto , the overall control effect of Shibagen and Glyphosate were the tiptops . But the control effect of Oxyfluorfen , Glyphosate bentazone , Bensulfuron was significant decreased 45 dats . The overall control effect of Shibagen was still satisfied even 3 months after treatment , and the dichondra lawn grew prosperous because of free of weeds .

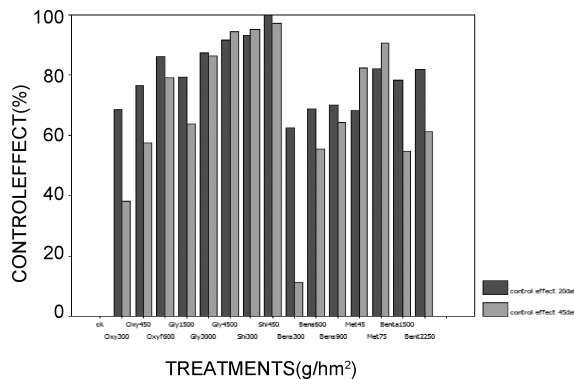


Figure 1 control effect variation between 20 and 45 dats .

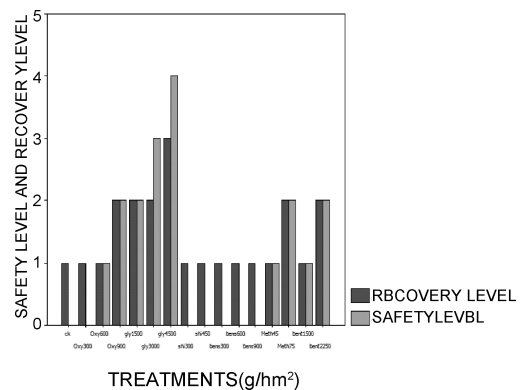


Figure 2 safety level and recovery level of treatments .

(note : safety level :0 no restrain ,5 entirely restrain ; recovery level :1 overall recovery , 3 can t recovered)

Shibagen and Bensulfuron was safe to dichondra in different dosage treatment 7 dats , whereas Oxyfluorfen , Glyphosate , Bentazone and Methsulfuron-methyl were safe to dichondra in low dosage , but made damage to dichondra in high dosage . But damaged dichondra which treat with Oxyfluorfen 600mL/hm² , Methsulfuron-methyl175g/ hm² and bentazon2250mL/hm² was recovered to natural growth 30 dats , and dichondra lawn treated with Glyphosate 1500~4500mL/hm² grew smaller leaf and restrained stolon although it was not yellowing .

Conclusion Shibagen 225 , 300 , 450 g/ hm² was not only safe to dichondra but control broadleaf sedgegrass and grassy weeds effectively which carry out preemergence occlude and postemergence stem-leaf killing simultaneously .