

## **Selectivity of Post-emergence Herbicides between Weeds and *Miscanthus sacchariflorus***

Yeonhwa Lim<sup>1</sup>, Jong-Seok Song<sup>2</sup>, Do-Soon Kim<sup>3\*</sup>

<sup>1</sup>National Institute of Crop Science (NICS), RDA, Jeon–ju, Republic of Korea

<sup>2</sup>Plasma Technology Research Center, National Fusion Research Institute, Gunsan, Republic of Korea

<sup>3</sup>Department of Plant Science, Research Institute of Agriculture and Life Sciences, College of Agriculture and Life Sciences, Seoul National University, Seoul, Republic of Korea

### **[Introduction]**

*Miscanthus* is one of promising bioenergy sources because of its high biomass yield. It dramatically develops the canopy from the end of the third year after planting. The perennial traits make its planting densities lower and spaces between plants wider. The first year growth of *Miscanthus* is interfered with weeds, resulting in significant growth reduction. This study was thus conducted to screen suitable post-emergence herbicides for weed control in *Miscanthus* field.

### **[Materials and Methods]**

The experiment was conducted in the glasshouse at the Experimental Farm Station of Seoul National University, Suwon, Korea. Each rhizome of *Miscanthus sacchariflorus* cut into 10-cm segments with axillary buds were planted 5 cm deep in a 12 cm diameter pot containing field soil in April 2014. Nine post-emergence herbicides were applied to *Miscanthus* foliage at the third leaf stage. Plant height, number of stems, fresh weight of *Miscanthus* and the weeds were assessed 50 days after application.

### **[Results and Discussions]**

Of the post-emergence herbicides, dicamba, bentazon, and mesotrione showed no or little phytotoxic effect on early growth of *M. sacchariflorus* at their recommended doses. They also showed good control of broadleaf weeds such as *Chenopodium album* and *Amaranthus lividus*. Post applications of dicamba, bentazon, and mesotrione are invulnerable for *M. sacchariflorus* and can be used to control post-emergent broadleaf weeds.

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\*Corresponding author: Tel. 02–880–4542, E–mail, dosoonkim@snu.ac.kr