

Mesotrione and Tembotrione Applied Alone or in Tank-Mix with Atrazine on Weed Control in Elephant Grass

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Abstract : The experiment was carried out in Valença, Rio de Janeiro State, Brazil, to evaluate the selectivity and weed control of carotenoid biosynthesis inhibiting herbicides applied alone or in combination with atrazine in elephant grass crop. The treatments were as follows: mesotrione (0.072 and 0.144 kg ha⁻¹ + 0.5% v/v mineral oil - Assist®), tembotrione (0.075 and 0.100 kg ha⁻¹ + 0.5% v/v mineral oil - Aureo®), atrazine + mesotrione (1.25 + 0.072 kg ha⁻¹ + 0.5% v/v mineral oil - Assist®), atrazine + tembotrione (1.25 + 0.100 kg ha⁻¹ + 0.5% v/v mineral oil - Aureo®), atrazine + mesotrione (1.25 + 0.072 kg ha⁻¹), atrazine + tembotrione (1.25 + 0.100 kg ha⁻¹) and two controls (hoed and unhoed check). Two application rates of mesotrione with the addition of mineral oil or the tank mixture of atrazine plus mesotrione, with or without the addition of mineral oil, did not provide injuries capable to reduce elephant grass forage yield. Tembotrione was phytotoxic to elephant grass when applied with mineral oil. Atrazine and tembotrione in a tank-mix, with or without mineral oil, were also phytotoxic to elephant grass. All treatments provided satisfactory weed control.

Keywords : forage, Napier grass, pasture, Pennisetum purpureum, weeds

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