

## Hairy Beggarticks (*Bidens pilosa* L. - Asteraceae) Control in Sunflower Fields Using Pre-Emergence Herbicides

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**Abstract :** One of the most damaging species in sunflower crops in Brazil is the hairy beggarticks (*Bidens pilosa* L.). The large number of seeds, the various vegetative cycles during the year, the staggered germination and the scarcity of selective and effective herbicides to control this weed in sunflower are some of attributes that hinder the effectiveness in controlling hairy beggarticks populations. The experiment was carried out with the objectives of evaluating the control of hairy beggarticks plants in sunflower crops, and to assess sunflower tolerance to residual herbicides. The treatments were as follows: S-metolachlor (1,200 and 2,400 g ai ha<sup>-1</sup>), flumioxazin (60 and 120 g ai ha<sup>-1</sup>), sulfentrazone (150 and 300 g ai ha<sup>-1</sup>) and two controls (weedy and weed-free check). Phytotoxicity on sunflower plants, percentage of control and density of hairy beggarticks plants, sunflower stand and plant height, head diameter, oil content and sunflower yield were evaluated. The herbicides flumioxazin and sulfentrazone were the most efficient in hairy beggarticks control. S-metolachlor provided acceptable control levels. S-metolachlor (1,200 g ai ha<sup>-1</sup>), flumioxazin (60 g ai ha<sup>-1</sup>) and sulfentrazone (150 g ai ha<sup>-1</sup>) were the most selective doses for sunflower crop.

**Keywords :** flumioxazin, *Helianthus annuus*, S-metolachlor, sulfentrazone, weeds

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