



### Longevity of horseweed seed bank depending on the depth of burial

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Horseweed (*Conyza* spp.) belongs to the Asteraceae Family and is considered one of the major weeds occurring in agricultural areas of South America, especially in Brazil. This specie is adapted specifically to the no-tillage system because of biological characteristics such as large seed production, ability to develop under straw and spread over long distances. Also, this specie is resistant to EPSPs inhibitor herbicides and ALS; and seeds buried at greater depth could have greater longevity, which complicates their management. Therefore, this study was lead to determine the physiological quality and longevity of horseweed seeds in 12 months. The experiment was conducted under field conditions at the Federal University of Pelotas, Rio Grande do Sul, Brazil, using a randomized block design with four replications. Were distributed 50 horseweed seeds into 50 g of dry soil, placed in permeable nylon mesh bags (10 x 10 cm), which were buried at 1, 2, 4 and 8 cm deep. Each month, for 12 months, samples were collected and washed with water and the remaining seeds submitted to germination test. Were evaluated the percentage (%) of remaining seeds, germination, abnormal seedlings, dead seeds, dormancy and viability. Data were analyzed by ANOVA ( $p \geq 0.05$ ) and being significant treatments were compared by Duncan test ( $p \geq 0.05$ ). It was found that the horseweed seed bank was reduced by 59 % during 12 months. As well that the horseweed seed develops secondary dormancy, regardless of the depth of burial. In addition, the increasing depth of burial increases longevity and physiological seed quality.

**Palavras-chave:** *Conyza* spp., survival, dormancy, germination, viability.