A weed can be defined as a plant that interferes with human activity, in USA weeds are responsible for 12% of yield loss every year and one of the most effective ways of weed control is through the use of herbicides. This chemical products, combined with modern technology, are one of the reasons why agriculture could reach such high levels of yield production and quality.

It is highly known that weeds can develop resistance to herbicides but, on a different line of study, it may be possible that weeds and herbicides have a synergic association, favoring the weed in some way. In WIU experimental farms we were able to observe that in fields treated with Fomesafen (Flexstar™) there were a higher population of velvetleaf plants than in fields where Fomesafen was not applied.

The objective of this article is to test if there is a synergism association between Fomesafen and Velvetleaf germination. In order to support or study susceptible Waterhemp, Morning glory, and Lambsquarters were also tested.

The experiment was conducted on a germination chamber and a 6ml of solution were used, each one containing 50%, 25%, 5%, 1%, and 0% of the ideal does. To evaluate the result, the germinated seeds were counted every 6 days for three weeks. Although the results did not show any big differences between the doses applied, it is worth mentioning that resistant weeds benefit from the herbicide application due to the lack of competition as the herbicide kills the other weeds.