

ABSTRACT

EFFECTIVENESS OF PAPAYA (*Carica papaya* L.) LEAVE EXTRACTS TO CONTROL NUTSEDGE WEED (*Cyperus rotundus* L.) AND THEIR EFFECT ON MUNG BEAN (*Vigna radiata* L.)

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Nutsedge (*Cyperus rotundus* L.) is one of the important weeds in mung bean (*Vigna radiata* L.) cultivation. Nutsedge is a type of weed that is difficult to control because of its strong adaptability to various soil conditions, besides that it can reproduce quickly through the vegetative (stolon and tuber) and generative (seeds) parts. Nutsedge weed control can be done by using both inorganic herbicides and organic herbicides. One of the ingredients that can be used as an organic herbicide is papaya leaves (*Carica papaya* L.) which contain allelochemical compounds such as alkaloids, flavonoids, steroids, and phenolic compounds that can inhibit the growth of nutsedge weeds. This study aims to determine the effectiveness of papaya leaf extract in controlling nutsedge weeds in mung bean plantations. The experiment was conducted in the experimental garden, of the Faculty of Agriculture, Siliwangi University, using a Randomized Block Design (RDB), 5 treatments and 5 repetitions. The treatments tested were control (without herbicide), synthetic herbicide (glyphosate), and papaya leaf extract concentrations of 20%, 40%, and 60%. Data were analyzed using variance and continued with Duncan's Multiple Distance Range Test with 5% significance level. The results showed that papaya leaf extract with the concentration of 60% was effective in inhibiting the growth of nutsedge weeds and did not cause poisoning in mung beans.

Keywords : papaya leave extract, nutsedge, mung bean