Pengaruh Berat Buah dan Lama Perendaman Ekstrak Buah Pepaya Terhadap Pematahan Dormansi Benih Semangka Non Biji (*Citrulus vulgaris* schard), *Effect of Fruit Weight and Soaking Duration of Papaya Fruit Extract on Breaking Dormancy of Watermelon Seedless (Citrullus vulgaris schard).* Supervised by Ir. Dwi Rahmawati, SP.,MP.IPM

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ABSTRACT

Watermelon are one of the horticultural crops originating from Africa and are favored by people for their sweet taste and high water content. Watermelon seeds have dormancy properties so they need to be treated before planting or germinating. This can be caused by seed dormancy, which is the encasement of the seed by the seed coat. Seeds with hard seed coats usually undergo physical dormancy. This research aims to determine the effect of fruit weight and soaking duration of papaya fruit extract on breaking dormancy of watermelon seedless. The research was conducted in June 2023 at the Laboratory of PT. East West Seed Indonesia (EWINDO), Muktisari Village, Tegal Besar Subdistrict, Jember Regency, East Java Province. The experimental design used was a Factorial Completely Randomized Design (CRD) with 2 treatment factors and 3 replications. The first factor was the weight of papaya fruit, which was 250 grams/liter, 500 grams/liter, and 1000 grams/liter. The second factor was the duration of soaking, which was 10 minutes, 20 minutes, and 30 minutes. The data obtained were then tested using ANOVA and Least Significant Difference 1% and 5%. The research results indicate that the treatment of papaya fruit weight significantly affected the parameter of radicle emergence (RE). Papaya fruit weighing 250 grams/liter provided a radicle emergence (RE) percentage of 34.44%. The interaction of the treatment of fruit weight and soaking duration of papaya fruit extract significantly affected the parameters of radicle emergence (RE) and had a very significant effect on the parameter of maximum growth potential (PTM). The interaction of the treatment of fruit weight and soaking duration of papaya fruit extract provided a radicle emergence (RE) percentage of 41.33% and a maximum growth potential (PTM) percentage of 74%.

***Keywords**: watermelon seedless, fruit weight and soaking duration of papaya fruit extract*