

**NUR RUSDYANTO** The Effect of Auxin Concentration and Total Segment to growth with tendrils of worms Plant cuttings of Bengal Pepper (*Piper retrofractum* Vahl). **Guidance with Ir. Wahyu Widodo, MP dan Ir. Suwardi, MP.**

### **ABSTRAK**

This study aims to obtain the most appropriate NAA concentration in improving the success and growth of plant cuttings Bengal Pepper, get how many segments are best for cutting material Bengal Pepper, knowing the interaction between NAA concentration and amount of plant cuttings Bengal Pepper segment. This research was conducted in the village of Sari Village Spring Giriyono Compassionate District of Kulon Progo Regency Yogyakarta. This research was done with the design environment that is completely randomized design (CRD) factorial 4 x 3. The first factor is the concentration of NAA consisting of 4 levels A0 = Control, A1 = 2000 ppm, 4000 ppm = A2, A3 = 6000 ppm. The second factor is the lateral branch cuttings consisting of over 3 levels vertebra S1 = 1, S2 = 2 segment, S3 = 3 sections. Parameter cutting observations include the percentage of life, time appears of buds, long of buds, leaf area, average of total root length, number of roots, shoots diameter, weight of fresh shoots, weight of dry root, weight of dry shoots. Results were analyzed variability in the level of 5%. To know the difference between the levels is done by Duncan's Multiple Range Test (DMRT) at 5%. The analysis showed there is no interaction between the long segment The concentration of NAA with Bengal Pepper. The concentration of 2,000 ppm NAA and without giving NAA, it has better results on the percentage of live cuttings. The concentration of 2,000 ppm NAA gives better results at a time appears buds, bud long lifespan (1, 2, 3) BST, leaf area, weight of fresh shoots, and weight of dry shoots. Bengal Pepper with three segments give the better results than with one and two sections on the long shoots of age (1, 2, and 3 BST), the fresh shoot weight and weight of dry shoots.

**Keywords:** Bengal Pepper, The concentration of NAA, Total Segment