

**Optimization of Plant Spacing and Liquid Complementary Fertilizers  
Corn Crop Production (*Zea mays L.*)**

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**ABSTRACT**

The Fluctuations of Indonesian caused corn production is often dependent on import. Low productivity is one of problem of low corn production. Increasing corn productivity can be supported by improving cultivation methods through increasing population and fertilization. This research aims to determine the optimal plant spacing and liquid complementary fertilizer to increase corn crop production. This research was conducted at the State Polytechnic of Jember, Sumpalsari District, Jember Regency, East Java Province. This research used a factorial randomized block design with 2 factors and 3 replications. The first factor was the plant spacing namely 70 x 20 cm, 75 x 15 cm and 80 x 10 cm. While the second factor was the dosage of liquid complementary fertilizer, namely 0 l/ha, 15 l/ha, 25 l/ha, and 35 l/ha. The result showed the best production result at a spacing of 80 x 10 cm. Meanwhile, the best growth result were at a spacing of 70 x 20 cm. For dry shelled weight at a spacing of 80 x 10 cm, the yield potential is 13 tons/ha, for 70 x 20 cm is 11.2 tons/ha and for spacing 70 x 15 cm, it produces 11.6 tons/ha. And the best dosage of liquid complementary fertilizer in production yields is 35 l/ha.

Keywords: *corn, liquid supplementary fertilizer, planting distance*