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## Effects of Planting Pattern and Planting Distance on Growth and Yield of Turmeric (*Curcuma longa* L.)

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**Abstract:** The effects of planting pattern and planting distance on the growth and yield of turmeric (*Curcuma longa* L.) were examined in Okinawa Prefecture situated in southern Japan. The dry weights of shoot and rhizome (yield) of turmeric planted in a triangular pattern were heavier than those planted in a quadrangle pattern. A 30-cm-triangular planting pattern resulted in the heaviest shoot and rhizome yield among the planting patterns examined. Dry weight of shoot per unit land area (m<sup>2</sup>) was significantly heavier when planted at a 20- and 30-cm spacing than when planted with a larger spacing, whereas the highest yield was obtained when planted at a 30-cm spacing followed by 20- and 40-cm spacing. When turmeric was planted at a 20-cm spacing, rhizome could not expand properly, which ultimately resulted in the smaller rhizome compared with that planted with a larger spacing. The highest turmeric yield coupled with the lowest weed biomass was obtained on the two-row ridge in a 75-100 cm width compared with a one- or two-row ridge in a larger or smaller width. This study indicates that for reducing weed interference and obtaining higher yield, turmeric should be planted in a 30-cm-triangular pattern on two-row ridge in a 75-100 cm width.

**Keywords:** [Planting density](#), [Rhizome-stub expansion](#), [Ridge width](#), [Triangular planting](#), [Turmeric yield](#), [Weed interference](#)



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