



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**Effect to the Young Inflorescence Length on the Callus Formation and Plant
Regeneration in Yellow Bluestem (*Bothriochloa ischaemum* (L.) Keng)**

Ersin CAN

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Abstract: This study was carried out to determine the effect of inflorescence length on callus induction and plant regeneration in yellow bluestem (*Bothriochloa ischaemum* (L) Keng). Inflorescences with different lengths (2-25 mm) from the in vitro regenerated plants of a *Bothriochloa* - ecotype with a good response to in vitro culture were cultured on LS-medium with addition 8 mg/l dicamba. The results of the study showed that the rates of callus induction related to inflorescence length varied from 20.3% to 46.9%. The highest callus weight per inflorescence was obtained from the inflorescences with a length of 11-15 mm. Increasing the inflorescence length decreased the callus weight per inflorescence when inflorescences longer than 15 mm were used as explant. The highest rate of regeneration (10.860 plantlets per inflorescence) was obtained from the inflorescence with a length of 16-20 mm. Increasing the inflorescence length decreased the regeneration rate when inflorescences longer than 20 mm were used as explant. It was concluded that inflorescences that are yellowish and 11-20 mm long can be used as explant for the establishment of the embryogenic callus cultures of *Bothriochloa ischaemum*.

Key Words: Yellow bluestem, young inflorescences, inflorescence length, in vitro culture.

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