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**EFFECT OF ETHREL (2 CHLORO-ETHYL PHOSPHONIC ACID)  
ON GROWTH AND YIELD OF BHENDI (*ABELMOSCHUS  
ESCULENTUS* L MOENCH)**

Yield is a complex character which is influenced by many physiological activities within the plant and hormones have an important role as biochemical regulators. Chhonkar *et al.* (1977) reported increased yield of fruits in bhendi plants treated with Ethrel. Muthukrishnan *et al.* (1976) reported 20.31 and 49 per cent increase over control in tapioca and sweet potato respectively treated with Ethrel. The present study aims to evaluate the possible role of Ethrel on growth and yield of bhendi.

The biological material used in this study was bhendi Cv. Kilichundan. Four concentrations of Ethrel (200, 400, 600 and 800 ppm) was sprayed on the 30th day after sowing using a hand sprayer. The experiment was laid out in a randomized block design with 6 replications in the red loam soils of the College of Agriculture, Vellayani during 1978 khariff season. From each plot 5 plants were selected at random for recording observations on plant height, number of branches and yield of fruits. Harvesting and weighting of fruits were done at regular intervals and the plot mean was calculated. Observations on plant height and number of branches were made on the 75th day after sowing.

**Table 1 Plant height, number of branches and yield of fruits of bhendi as influenced by different concentration of Ethrel**

| Treatments     | Height of plants (m) | Number of branches | Yield of fruits (g) |
|----------------|----------------------|--------------------|---------------------|
| Ethrel 200 ppm | 1.96                 | 1.33               | 444.58              |
| Ethrel 400 ppm | 1.57                 | 1.42               | 475.83              |
| Ethrel 600 ppm | 1.50                 | 2.25               | 506.83              |
| Ethrel 800 ppm | 1.44                 | 2.17               | 435.75              |
| Control        | 1.85                 | 1.17               | 305.00              |
| C. D. at 5%    | 0.302                | 0.738              | 133.952             |

The results presented in Table 1 indicate that the treatments significantly reduced plant height than control except in plants sprayed with 200 ppm Ethrel.

Shukla and Tewari (1974) reported 12 and 15 per cent reduction in shoot elongation in bhendi plants sprayed with Ethrel at 500 and 1000 ppm respectively.

Significant increase in the number of branches over control was noticed in plants treated with 600 and 800 ppm Ethrel. The results are in conformity with that of Chhonkar et al. (1977) who have reported increased branching over control in bhendi treated with 200 and 400 ppm Ethrel.

Significant increase in yield of fruits over control was noticed in all the concentrations of Ethrel except in plants treated with 800 ppm. The highest yield (506.3 g/plant) was recorded in plants treated with 600 ppm Ethrel. This result agrees with the findings of Chhonkar et al. (1977) who reported increased yield of fruits over control in bhendi plants treated with 200 ppm Ethrel. The increased yield of treated plants may be due to the cumulative effect of greater branching, additional sites for more inflorescences and finally greater utilisation of photosynthates diverted for production (Chhonkar et al. 1977)

#### സംഗ്രഹം

എത്രൽ (Ethrel) എന്ന രാസവസ്തു വിവിധ ഡോസുകളിൽ 'കിളിച്ചുണ്ടൻ' എന്ന ചെടിയിൽ വെണ്ടിച്ചെടിയിൽ (OTgl.ajGnJOCo വിളവ്) വർദ്ധന ഉണ്ടായതായി കണ്ടു. 600 ppm ലായനി തളിച്ച ചെടികൾക്ക് മറ്റുള്ള ഡോസുകൾ തളിച്ച ചെടികളേക്കാൾ കൂടുതൽ കവരം rosgo വിളവു ഉണ്ടായതായി കണ്ടു.

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