Effect of Plant Growth Regulators on Coriander (*Coriandrum sativum* L.) with Varying Sowing Dates

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Abstract—*A field investigation was carried out during the year 2014-15 and 2015-16 at Horticultural Research Station, Mondouri, Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, West Bengal to study the effect of Plant Growth Regulators with varying sowing dates on growth and yield of coriander (Coriandrum sativum L.). The experiment consisting of 3 sowing dates (5th November, 14th November and 23rd November) and 6 plant-growth regulators along with concentration each (GA_3 25 and 50 ppm, NAA 50 and 75 ppm and IAA 10 and 20 ppm) making eighteen treatment combinations, were replicated thrice in a split plot design, keeping date of sowing in main-plots and PGR treatments in sub-plots.*

The study revealed that early sowing (in this case 5th November) showed the best with regard to important growth parameters like plant height (45 DAS: 12.05cm, 90 DAS: 67.55cm and at harvesting: 81.77cm), number of secondary branches(10.92) and yield attributing characters like umbellets per umbel (5.23), umbel per plant (25.04), seed per umbel (24.66), seed yield per plant (5.99g), seed yield per plot (251.86g) and projected seed yield per hectare (1.50t) and quality character like oleoresin (3.358 %) and essential oil (0.311 %) in coriander were concerned. Among the PGRs GA_3 @ 50 ppm proved to perform better than all the other growth regulators for plant height, number of primary branches and secondary branches per plant, number of umbels per plant, number of umbellets per umbel, number of seeds per umbel, seed yield, oleoresin and essential oil and took minimum number of days to 50% flowering and maturity followed by NAA.

Keywords*: Coriander, PGRs and sowing date.*