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ORIGINAL ARTICLE

COTTON CULTIVARS RESPONSE TO MEPIQUAT CHLORIDE (PIX)

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Abstract : A field experiment was conducted at the research station of Field Crops Department, College of Agricultural Engineering, University of Baghdad, AL-Jaderyah for the two summer seasons 2016 and 2017, to investigate the growth and yield of different responses of three cotton cultivars to the concentrations of Mepiquate chloride (pix). The study included the effect of two factors : the cultivars (Lashata, coker 310 and AL-Tammem) which represented the main plots, and the second factor is spraying pix in concentration (0.5, 1 and 1.5) Lha^{-1}, in addition to control treatment (without spraying pix) which represented the minor plots. The Randomized complete block design (RCBD) was conducted with split - plot design in three replications. The results shows significant differences between cultivars in most studied characters. As coker 310 cultivars exceeded by giving highest average in number of sympodia and number of open bolls which reflected on increasing seed cotton yield (3950.5 and 3135.1) $kgha^{-1}$, cotton lint yield. No significant effect was indicated of growth retardant (pix) in bolls weight. The interaction between the treatments of the plants of coker 310 cultivars sprayed with pix in concentration of 1.5 Lha^{-1} gave highest average in number of sympodia. Number of open bolls and seed cotton yield reached (4121.3 and 3349.0) $kg.ha^{-1}$ and the cotton lint yield, while the interaction between the treatment of AL-Ta¢meem unsprayed with pix gave highest average in shedding percentage (37.28 and 36.65) % while no significant effect was indicated for the interaction between the cultivars and pix concentration in bolls weight for both seasons 2016 and 2017 respectively. We concluded that there was differences in the response among cultivars when sprayed with (pix) and the best results was at the high concentration of the growth retardant when compared with control treatment.

Key words: Number of sympodia, The shedding percentage, Seed cotton yield, The earliness percentage.