

عنوان مقاله:

Velvetleaf interference with cotton planted in conventional and ultra narrow row spacings

محل انتشار:

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خلاصه مقاله:

Crop row spacing and weed density affects on the growth and weed seed production and cotton yield. In order to evaluate the Velvetleaf interference with the cotton planted in conventional and ultra narrow row spacings, an experiment was conducted in a completely randomized block design with split plot arrangement of treatments at Experimental Station of Gorgan University of Agriculture Sciences and Natural Resources during ۲۰۱۱ growing season. The treatments were three row spacings (۰ (monoculture weed), ۲۰cm, ۴۰cm and ۸۰cm) of cotton (mainplot) and four densities (۱, ۳, ۵ and ۱۲ plant.m^{-۲}) of velvetleaf (subplot). Each plot including five rows with ۷m length of cotton was considered as one replication and the experiment was done with three replications. Result showed that, plant density (increase crop or weed density) was affected on the velvetleaf yield component and cotton row spacing. The increase plant density increased plant height, height of highest sub branch and reduced capsule number and seed weight of velvetleaf. The weed velvetleaf seed production fitted a liner regressions function. The liner regression equation was estimated by increase per plant of weed density velvetleaf seed production was increased to ۲۸۷۷.۳۳۴۷, ۳۵۱۷.۶۰۸۳, ۲۹۷۲.۴۹۷۴ and ۳۴۴۰.۸۳۰۳ seed.m^{-۲} in monoculture and competition with ۲۰, ۴۰ and ۸۰ cm cotton row spacing, respectively. Too, by increase per gram weed dry matter was increased velvetleaf seed production to ۴۷.۵۶۵۸, ۸۰.۳۸۲, ۷۵.۲ and ۶۰.۰۶ seed.m^{-۲} in monoculture and competition with ۲۰, ۴۰ and ۸۰ cm cotton row spacing, respectively. So, the dry matter of cotton decreased by increasing the velvetleaf density, but the rate of decreasing was different between row spacings. Cotton yield loss increased with increasing of weed density, but the yield loss rate in Ultra Narrow Row ((UNR) was lower than ۴۰cm and Conventional Row spacing (CR

کلمات کلیدی:

.Seed production, Competition, Plant density, Dry matter, Yield loss

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