ABSTRACT BOOK

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GROWTH BEHAVIOUR OF DIFFERENT CATEGORIES OF ASSOCIATED WEEDS IN JUTE

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Field experiment was conducted in the sandy loam soil of Instructional farm (22.93^{0}N and 88.55^{0}E) of BCKV, Mohanpur, West Bengal for two years during the summer-rainy seasons of 2001-2002 to study the growth behaviour of different categories of weeds associated in newly released varieties of capsular (JRC 698) and olitorius (JRO 66) jute. The grassy weeds were the most predominant species followed by broadleaved weeds and the sedges were negligible. The predominant grasses in both type of jute were *Echinochloa colona* (L.), *Cynodon dactylon* (L.) Pers. and *Dactyloctenium aegyptium* (L.) Willd and the important broadleaves were *Physalis minima* L., *Amaranthus viridis* L., *Alternanthera philoxeroides* (Mart.) Griseb. and *Phyllanthus niruri* L. The dry weight of grassy weeds in natural competitive situation in capsular jute were 59, 88, 186 g m^{-2} at 30, 60 and 90 days after sowing (DAS) respectively. The growth behaviour of grass weeds in capsular jute varied over time in a sigmoidal curve, $Y = 1.98 + 0.80 X = 0.03 X^2$ ($R^2 = 0.98$), where, Y = weed biomass and X = DAS, Similar type of sigmoidal curve ($Y = 0.21 + 1.08 X = 0.02 X^2 - 0.0002 X^3$, $R^2 = 0.99$) was also observed in the growth pattern of grasses associated in olitorius jute. In capsular jute the peak of the grass dry weight (187 g m^{-2}) was observed at 112 DAS, whereas, in olitorius jute the grass peak (114 g m^{-2}) was at 87 DAS. Contribution of broadleaved weeds in terms of dry weight to the total weed biomass were reduced over time in both calsularis and olitorius jute. The part contribution of broadleaved weeds at 30 DAS were 44 and 47% in capsular and olitorius jute respectively and the same figure at 60 DAS were 26 and 25%. The growth curve of associated broadleaved weeds were, $y = 0.99 + 2.13 X - 0.033 X^2 + 0.0002 X^3$ ($R^2 = 0.94$) in capsular and $Y = 0.94 + 2.11 X - 0.031 X^2 + 0.0001 X^3$ ($R^2 = 0.95$) in olitorius jute. The highest dry weight of broadleaved weeds (peak) for capsular (31 g m^{-2}) and olitorius (34 g m^{-2}) jute were at 26 and 30 DAS respectively. It may be concluded that grasses, the most predominant weeds can grow vigorously in capsular jute as compared to olitorius up to 112 DAS and therefore, olitorius was more weed competitive as compared to capsular; regarding the broadleaved weeds both the species of jute were similar in weed competitiveness.