

Studies on morpho-physiological parameters in chickpea

SANTOSH BHATNAGAR AND P.K. SINGH

SUMMARY

Ten genetically diverse parents of chickpea were crossed in half diallel fashion to study the morpho- physiological parameters during four growth stages in a field experiment conducted at Indian Institute of Pulses Research, Kanpur. Wide variation was observed among all the parameters during all the four growth stages. Highest yielding parents (K850, JG62 and N59) and hybrids (ICC10035 x K850, ICC987 x K850 and ICC 4914 x JG62) were relatively short statured and exhibited greater initial growth leading to higher leaf area index, greater root length and weight. Dry matter production and crop growth rate were slow during early vegetative phase in all the parents as well as hybrids and increase progressively as the duration/ temperature advanced. A comparison of relative growth rates in parents and hybrids indicated more rapid RGR in early part of season implying faster rate of leaf development and profuse branching which are instrumental in producing better photosynthetic apparatus in hybrids before pod formation.

Key Words : Chickpea, Growth stages, Morpho-physiological parameters

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MEMBERS OF THE RESEARCH FORUM

Author to be contacted : P.K. SINGH, C.S. Azad University of Agriculture and Technology, KANPUR (U.P.) INDIA Email: pk_singh65@yahoo.com

Address of the Co-authors: SANTOSH BHATNAGAR, A.N.D. College, C.S.J.M. University, KANPUR (U.P.) INDIA