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Authors: [Shree, Yachna \(/browse?type=author&value=Shree%2C+Yachna\)](/browse?type=author&value=Shree%2C+Yachna)

Advisor: [Ram, Sohan \(/browse?type=author&value=Ram%2C+Sohan\)](/browse?type=author&value=Ram%2C+Sohan)

Title: CHARACTERIZATION OF Glycine max (L.) Merrill GENOTYPES UNDER RAINFED SITUATION

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Abstract: Soybean [*Glycine max* (L.) Merrill] is a major oil seed crop in the world and is called as a golden bean because of its versatile nutritional qualities having 18-20% oil and 38-43 % protein, which has biological value as meat and fish protein. It is referred to “the protein hope of the future” because of its high nutritive value as it is a good source of unsaturated fatty acids, minerals like Ca and P including vitamin A, B, C and D can meet up different nutritional needs. India is an important soybean producing country. Rainfed ecology plays significant role in production of soybean in India and plateau region of Jharkhand. The agroclimatic condition of Jharkhand provides ideal conditions for soybean production. To meet the continuous expanding needs of varietal improvement, the assemblage, evaluation, characterization and preservation of the entire existing genotypes are essential. Therefore, the aim of present study was to characterize ninety soybean genotypes based on quantitative and qualitative characters and to study the economically important traits of rainfed genotypes for their use in future breeding programme. The experiment was conducted in Western section of Research Experimental Area of Birsa Agricultural University, Kanke, Ranchi during Kharif-2014, using randomized block design with two replications. The characterization and evaluation work were done on 32 different quantitative and qualitative characters. Analysis of variance of ninety soybean genotypes showed significant variability among the genotypes for seventeen quantitative traits. The characters like days to 50% flowering, plant height, number of branches per plant, number of pods per plant, 100 seed weight, oil and crude protein percentage had high to medium GCV and PCV; high heritability (bs) and genetic advance as expressed in percent of mean. Number of pods per plant, seeds per pod and 100 seed weight recorded positive and significant correlation with yield. The present study revealed that the characters like plant height, number of branches per plant, seeds per pod, 100 seed weight, oil and crude protein percentage were found to be economically more important traits in soybean hence, should be given more weightage during selection. Thus, on the basis of the results of the present investigation, the genotypes viz. IC-501370, BAUS-40, JS-20-71, AMS-115, EC-24039 and IC-501376 may contribute significantly in future breeding programme to develop varieties with high yielding ability and resistance to diseases.

Description: CHARACTERIZATION OF *Glycine max* (L.) Merrill GENOTYPES UNDER RAINFED SITUATION

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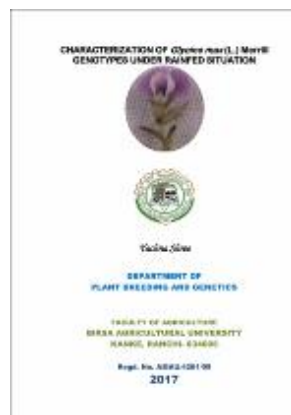
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