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RESEARCH ARTICLE

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Evaluation of seed qualitative parameters in *Kharif* and summer grown soybean [*Glycine max* (L.) Merril] genotypes

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ABSTRACT

An experiment was conducted to evaluvate ninety soybean genotypes in two seasons *viz., Kharif* and summer for seed qualitative characters. The *Kharif* season recorded significantly more hundred seed weight (14.09 g), seed length (1.14 cm), seed width (0.79 cm), seed density (1.99 g/cc), husk weight (1.84 g), dehusk seed weight (11.19 g) and embryo weight (1.09 g), compared to summer season (9.97 g, 1.09 cm, 0.74 cm, 1.14 g/cc, 1.54g, 7.52 g, 0.92 g, respectively). Among genotypes, significantly maximum hundred seed weight (15.95g), seed density (1.36g/cc) were recorded in VLSoya 1 and MACS-13, respectively and dehusked seed weight (12.38 g) in MAUS-1 over sowing and seasons.

KEY WORDS : Seed quality, *Kharif*, Summer, Genotypes, Soybean

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INTRODUCTION

Soybean is known as the "golden bean" of the 20th Century. Though, Soybean is a legume crop, yet it is widely used as oilseed. Due to very poor cookability on account of inherent presence of trypsin inhibitor, it can not be utilized as a pulse. It is now the second largest oilseed in India after groundnut. It grows in varied agro-climatic conditions. It has emerged as one of the important commercial crop in many countries. Due to its worldwide popularity, the international trade of soybean is spread globally. Several countries such as Japan, China, Indonesia, Philippines, and European countries are importing soybean to supplement their domestic requirement for human consumption and cattle feed.

Soybean has great potential as an exceptionally nutritive and very rich protein food. It can supply the much needed protein to human diets, because it contains above 40 per cent protein of superior quality and all the essential amino acids particularly glycine, tryptophan and lysine, similar to cow's milk and animal proteins. Soybean also contains about 20 per cent oil with an important fatty acid, lecithin and vitamin A and D 4 per cent mineral salts of soybeans is fairly rich in phosphorus and calcium.

The season of seed production is one of the important factors which influences the seed yield and quality since the weather conditions such as temperature, relative humidity, photoperiod and wind velocity vary from season to season and region to region resulting in differential seed yield and quality. The environments under which seeds are developed play a decisive role on seed quality. Therefore, selection of optimum season for producing better quality seeds is the most important aspect of soybean seed production programme but, the information on seasonal effect on seed quality is rather scanty in soybean and it needs to be investigated.

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MATERIALS AND METHODS

An experiment was conducted at College of agriculture, Dharwad, Karnataka, India during 2009-2010. The field experiment was laid out in the Completely Randomized Block Design with factorial concept and replicated thrice for record of various observations. 90 soybean genotypes were evaluvated in two seasons *viz.,*