Click www.researchjournal.co.in/online/subdetail.html to purchase.

ADVNACE RESEARCH JOURNAL OF CROP IMPROVEMENT
Volume 2 Issue 1 (June, 2011) Page : 112-114

Received : *May, 2011;* ***Accepted :*** *June, 2011*

Research Paper

Effect of mechanization with different land configuration on growth and growth attributes of soybean

J.A. JADHAV, D.B. PATIL AND P.G. INGOLE

See end of the article for authors' affiliations

Correspondence to :

D.B. PATIL
Department of Agronomy, College of Agriculture, NAGPUR (M.S.) INDIA
Email : dino2011@rediffmail.com

ABSTRACT

An experiment was conducted during the *Kharif* season of 2009-10 to study the effect of mechanization with different land configuration on growth and growth attributes of soybean with Randomized Block Design. The treatment consisted of six land configuration treatments. *viz.,* T_1 (Flat bed layout), T_2 (BBF layout), T_3 (Ridges and furrow), T_4 (Flat bet + opening of furrow after every two rows at 30 DAS), T_5 (Flat bet + opening of furrow after every 5 rows at 30 DAS), T_6 (Conventional / farmer's practice) and replicated four times.Result showed that, mechanized culture with broad bed furrow increased significantly plat height at 80, 100 and at harvest, number of functional leaves at 40 and 60 days, leaf area plant^{-1}, number of branches plant^{-1} at all growth stages, number of developing pods plant^{-1}, dry matter accumulation plant^{-1} at 80 DAS, AGR for dry matter and plant height in between 40-60 DAS, PGR in between 40-60 DAS, leaf area index, it also increased NAR between 40,60 and 80 DAS

Jadhav, J.A., Patil, D.B. and Ingole, P.G. (2011). Effect of mechanization with different land configuration on growth and growth attributes of soybean. *Adv. Res. J. Crop Improv.,* **2** (1) : 112-114.

Key words : Soybean, land configuration, mechanization Growth attributes

INTRODUCTION

Soybean (*Glycine max.* L.) is one of the important oilseed as well as leguminous crop.It is the cheapest and richest source of high quality protein. It supplies most of the nutritional constituents essential for human health. Hence, soybean is called as "Wonder Crop" or "Golden bean" or "Miracle bean". This crop in fact has made revolution in the agricultural economy with its immense potential, quality of Food, Feed, numerous industrial production commodity. Symbiotically soybean fixes 125-150 kg N ha^{-1} (Chandel and Bhatia, 1989)and leaves about 30-40 kg N ha^{-1} for succeeding crop (Sexena and chandel,1992). In India soybean is grown over an area of 7.46 m ha with a production of 8.35 m tonnes and with average productivity of 1007 kg ha^{-1}.Madhya Pradesh, Uttar Pradesh and Maharashtra are the major soybean producing states. (Anonymous, 2006).To improve growth potential of soybean it is necessary to use mechanization with different land configurations. Patil (2005) reported that in soybean all growth attributes *viz.,* plant height, number of leaves plant^{-1}, leaf area plant^{-1}, dry matter accumulation plant^{-1}, were significantly higher under ridges and furrow method of planting over flat bed method of planting. Considering the above facts, attempt was made to study the effect of mechanization with different land configuration on growth attributes of soybean.

MATERIALS AND METHODS

An experiment was carried out during *Kharif* 2009-10 at Gadadhi Block, Central Research station, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola (M.S.). The experiment was laid out in Randomized Block Design in Four replication with six land configuration treatment *i.e.* T_1 (Flat bed layout), T_2 (BBF layout), T_3 (Ridges and furrows), T_4 (Flat bet + opening of furrow after every two rows, at 30 DAS), T_5 (Flat bed + opening of furrow after every 5 rows at 30 DAS), T_6 (Conventional / Farmers practice). In treatments T_1 to T_5 are mechanized culture with tractor. Gross plot size was of 15 m x 4.5m with net plot size of 13.0m x 3.6m. The experimental site was