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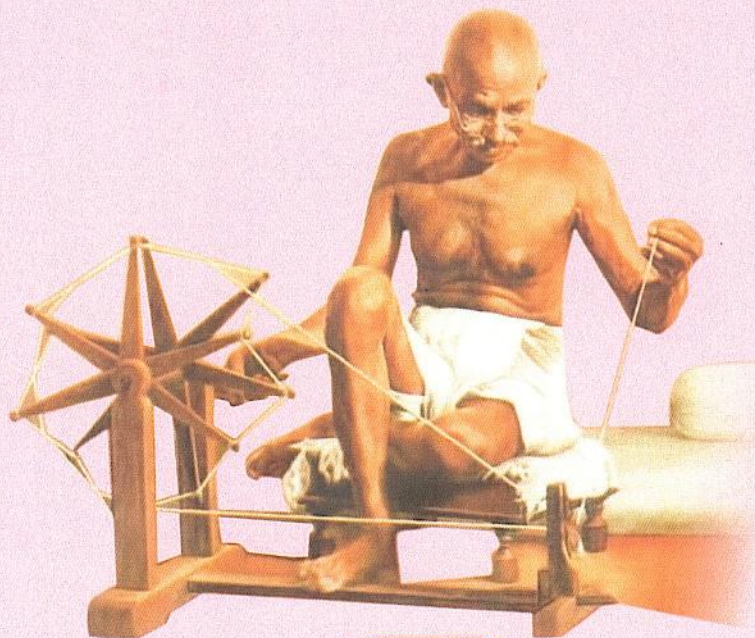
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GANDHIGRAM - 624 302 TAMIL NADU INDIA

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Marginalized Group, Differently Abled Persons, Social Exclusion and Inclusion, Fertility Studies, Development and Displacement etc.

Last but not least, I am delighted to inform the subscribers of the Journal, Faculty Members, Research Scholars, Students and all other well-wishers that JER has been granted recognition by University Grants Commission with Journal Number 48381. As such, the contributors of this Journal are given the necessary credit in the form of weight age in appointments, career advancement and promotions. I wish the subscribers and readers of this Journal all the best and look forward their continuous patronage.

S.GURUSAMY
EXECUTIVE EDITOR

JOURNAL OF EXTENSION AND RESEARCH

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EFFECT OF TILLAGE ON CROP PERFORMANCE IN KIGALI, RWANDA, AFRICA

Deepak Das and R.Udhayakumar

Abstract

Crop performance studies were conducted in the experimental site of Rwanda, for both dry seasons. In the experimental site four sample plots of 16m x 12m each were taken up. Two plots were prepared by using disk plough for 30cm depth followed by two passes of disk harrowing. Another two plots were conventionally prepared with hand hoe. All the four plots were chosen side by side. The ruling varieties of maize (Pool,9) and beans (PK 10) crops were selected and raised in tilled and conventionally prepared plots separately for comparison. During short dry season (Mid Dec 2009 to Feb 2010) in tillage operations, 89% and 92%; sowing, 16.4% and 19.4% and weeding operations, 18.3% and 18.6% of man-hour saved for maize and beans crops respectively under tilled plot when compared with conventional plot. Similarly in case of yield, 5484 kg/ha and 2026 kg/ha obtained in tilled plot for maize and beans crop respectively when compared with conventional plot (4765 kg/ha and 1796 kg/ha). The same trend was observed during long dry season (15th may 2010 - Aug 2010).

Key words: crop performance - yield of maize - yield of beans - tillage

Introduction

Rwanda popularly known as land of thousands of hills situated in the Central part of Eastern Africa, some 1600 km from the sea; latitude 2°S and longitude 30°E; surrounded by Uganda, Tanzania, Burundi and Congo-Kinshasa. The country has a total geographical area of 26,338 km². Eleven per cent (2,849 km²) of the country is occupied by lakes, rivers, marshes, towns, roads and built-up areas. The remainder (23,487 km²), called "green land", can be used for crops, grazing, and natural vegetation.

Soil and climatic condition of Ruburizi farm restricts rooting, and eventually crops grown during dry seasons suffer water and nutrient losses leading to yield decrease (Rutunga, 2007). In addition to this