DYNAMICS OF SEED POTATO UTILIZATION IN HIGH TEMPERATURE CONDITIONS UNDER SEMI-ARID ECOSYSTEM

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Abstract

In order to understand dynamics of seed potato utilization, a joint survey was conducted by CIP and CPRI during 2009 covering 93 respondents from three randomly selected villages of Gandhinagar district in Gujarat. Kufri Badshah was the leading potato variety followed by Kufri Pukhraj and Kufri Lauvkar. The research paper describes the farm size category wise seed potato replacement rate, seed potato supply source, replacement and retention of own seed potato, method employed for seed potato production and rate of seed potato use. Size of seed tubers used along with the form of seed use i.e. cut or whole was also studied for all farm size categories of the respondents. Variety wise potato productivity and adoption rate of different varieties provide crucial information not only to the varietal developmental programmes/teams, but also to the policy makers in order to take informed decisions for keeping a check on unhealthy fluctuations in the prices of seed potato.

Key words: Heat stress, Seed potato utilization, Seed replacement rate, Varietal adoption.

1. Introduction

Seed is the most important determinant of crop health and productivity [Chand (2008)]. Potato is capital intensive crop where seed solely accounts for almost half of the total cost of cultivation. Potato crop being vegetatively propagated is prone to a large number of infections which are carried over from one generation to the other. Due to highly precise climatic specificities required in production and multiplication of healthy seed potato all agro-ecologies are not suitable for this endeavour [Govindakrishnan et al. (2011)]. Limitations in multiplying quality seed at many places restrict potato growers from producing their own seed for the next crop. It eventually forces them to use seed from other sources, which may not be reliable.

Gujarat is leading potato producing State in India, which is showing a rapid pace of growth in potato production and productivity. During the triennium ending 2008-09 Gujarat