



SHORT COMMUNICATION

## Sustainable Sugarcane Initiative (SSI): A Methodology of 'More with Less'

N. Loganandhan · Biksham Gujja · V. Vinod Goud ·  
 U. S. Natarajan

Received: 29 May 2012 / Accepted: 16 August 2012 / Published online: 16 September 2012  
 © Society for Sugar Research & Promotion 2012

**Abstract** Sugarcane is a significant crop in contributing to the country's economy and farmers' livelihood development. In India, sugar is a 550 billion rupees worth industry, supporting more than 50 million farmers. There is a growing demand for sugar in India. Hence, there will be more and more stress on the sugarcane eco-system in future. But, the present scenario of cane cultivation is not sustainable enough to meet this demand as the input and labor costs are increasing and the national mean cane productivity (2007–10) is at  $66.9 \text{ t ha}^{-1}$  only. So, it is necessary to improve the cane productivity in a sustainable way with minimum usage of inputs through some alternate methods on the principles of "more with less". A research study with the objectives of developing a methodology for sustainable sugarcane productivity was carried out at International Crops Research Institute for the Semi-Arid Tropics during 2008–11. As a result, a methodology was evolved encompassing six principle components, including improved bud chip method, under a concept called "Sustainable Sugarcane Initiative (SSI)". The evaluation trials conducted on the principle components revealed the optimum size and age of the bud chips (4–10 months old) and suitable media combination (cocopith + sawdust) for raising better seedlings. SSI field trials resulted in about 20 % higher yields. The state governments are showing interest in covering larger areas under SSI. SSI method can revamp the sugarcane

sector by its merits like ensuring of quality seed materials, increase in yield and income generating opportunities.

**Keywords** Sugarcane · Sustainability · Bud chip · Productivity · More with less

Sugarcane is a significant crop in terms of its contribution to the national economy and livelihood support to millions of farmers. In India, sugar is a 550 billion rupees worth industry and more than fifty million sugarcane farmers and their dependents and a large mass of agricultural laborers are involved in sugarcane cultivation, harvesting and ancillary activity (Sugar Economy 2011). There is a growing demand for sugar in India, the largest sugar consuming country in the world. According to the Agriculture Outlook prepared jointly by Paris-based Organization for Economic Cooperation and Development (OECD) and Food and Agriculture Organization (FAO), the sugar demand in India has been growing steadily at about four per cent per year over the past 10 years (PTI 2011). Hence, there will be more and more stress on the sugarcane eco-system to meet this growing demand in future. While the area and production of cane follow an 'up and down' cycle in every 3–4 years, the mean productivity of 11 major sugarcane producing states in India is at  $66.9 \text{ t ha}^{-1}$  only