Polytunnels: The Low-cost Option of Protected Cultivation. *In:* Protected Cultivation and Smart Agriculture edited by Sagar Maitra, Dinkar J Gaikwad and Tanmoy Shankar © New Delhi Publishers, New Delhi: 2020, (pp. 67-75). **ISBN: 978-81-948993-2-7, DOI:** 10.30954/NDP-PCSA.2020.7

Chapter

## Polytunnels: The Low-cost Option of Protected Cultivation

Rahul Adhikary\*, Arunabha Pal, S. Devika Rani and Sivala Kumar

Center for Smart Agriculture, Centurion University of Technology and Management, Parlakhemundi, Odisha-761211 \*Corresponding author: rahul.adhikary@cutm.ac.in

## Abstract

Polytunnels are basically open ventilated structures with partial control of micro-climate. The polytunnels have a variety of utilizations, the larger part being developing of vegetables, horticulture, planting material acclimatization, natural product crop developing for send out market. The low cost polytunnel, a novel treating the best technique was created for quick substrate groundwork for vegetable development utilizing perforated HDPE pipes (10% holes), iron edge and HDPE sheet (100-150 GSM). The fixings blend cereals extract, urea and gypsum with minimum moisture 60-75% utilized for treating the soil. The way toward fertilizing the soil was assessed and normalized as far as fertilizer quality, quantities of turning, fertilizing the soil time frame. The technique was additionally tried at occasional/business cultivator's ranches. The plan of the polytunnel depended on essential fixings and bio engineering qualities; rule of characteristic uninvolved air circulation and warmth mass exchange of treated the soil substrate.

Keywords: Polytunnels, vegetables, low-cost structure, partial environment control

## 1. Introduction

Agriculture is definitely not a worthwhile profession for the educated youth essentially because of the difficulty related with field work. Current advancements like ensured development ought to be a gainful and serious as some other industry so as to motivate them. At exactly that point, a feeling of pride will be related with agribusiness movement of the rustic youth towards the metropolitan regions in look for better vocation alternatives. Being capital serious, significant expense of money and deferrals in endorsement of advance demands, this innovation has endured moderate