PRINT: ISSN 0976-6898 ONLINE: ISSN 2456-6535
JOURNAL OF
AGRICULTURAL SCIENCES

PRINT: ISSN 0976-6898 ONLINE: ISSN 2456-6535
J Agri Sci, 9(1-2): 11-19 (2018)
DOI: 10.31901/24566535.2018/09.1-2.105

The Sustainability in Training Hydroponic Production to Smallholder Farmers in the Tshwane Area, Gauteng Province, South Africa

R. Morifi[1], P. I. Maponya[1] and J. A. Van Niekerk[2]

[1]Agricultural Research Council-Vegetable and Ornamental Plant, Pretoria, South Africa
[2]University of the Free State, Centre for Sustainable Agriculture, Rural Development and Extension, South Africa

KEYWORDS Gauteng Province. Hydroponic Production Training. Smallholder Farmers. South Africa. Sustainability. Tshwane Municipality

ABSTRACT Smallholder farmers in the city of Tshwane Metropolitan were given three standard tunnels through comprehensive agricultural support programme to produce vegetables in a hydroponic system. This research sought to determine the sustainability in training hydroponic production to 38 smallholder farmers in the city of Tshwane. The objectives were as follows: (1) To describe socio-economic characteristics of the smallholder farmers, (2) To identify factors that contribute to the sustainability of smallholder farmers and, (3) To assess the effects of the hydroponic production training. The researchers used sustainability approach and Donald Kirkpatrick training evaluation model. The analysis found that most smallholder farmers were not sustainable, while they had increased their knowledge and skills in hydroponic production and their attitude had changed after the training. With regard to production, it was found that trained smallholder farmers increased production, increased quality of hydroponic produce, reduced waste and also increased sales. It can thus be concluded that smallholder farmers must be regularly trained and monitored to achieve the goals of sustainable development.