

EFFECT OF PHYSICAL PROPERTIES OF DATE PALM WASTES AS CULTURE MEDIA ON GROWING INDICES OF GERBERA FLOWER

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Introduction

Gerbera(*Gerbera Jamesonii* L.) is one of the best cut flowers in the world. Cocopeat growing media usually used for gerbera flower. On the other hand, date-palm extensively exists in the world and Iran and produce a lot of wastes every year. But there are no appropriate management for application of these material. It seems that date-palm wastes can be used as a substrate in greenhouse cultivation and reduce costs. The objective of this study was to compare some of the growing indexes of gerbera that were cultured in cocopeat and date-palm media.

Materials and Methods

This research was carried out as completely randomized design with three treatments and three replications. The treatment were including cocopeat+perlite, row date-palm and used date-palm wastes. In a period of 9 months, some quality and quantity characteristics of flowers were measured such as number, stem height and flower disc diameter. The analysis of all data was done by SAS statistical software.

Results and Discussion

The results of analysis showed that the treatments had no any significant difference in flower height and flower disc diameter but there was a significant difference in flower number. Used date-palm media produced maximum flower numbers(14.3) and row date-palm media had lowest production(6). The flower number of gerbera in used date-palm could be the results of faster plant development due to good root growth and better physicochemical properties. Nowak and strojny (2004) reported that the total porosity, bulk density, shrinkage water capacity and air capacity of the growing substrates had significant effects on the number and weight of fresh flowers in gerbera. The low amount of bulk density(0.15) and the high amount of porosity(0.89) in date-palm media allow the plant root penetrate in substrate easily and it could use more volume of media, thus available water and nutrient elements were sufficient for plants grow up in this media(Mohamadi et al. 2012).

The results indicated that cocopeat and date-palm media had not creat any significant difference on yield and quality of gerbera. Thus with considering to low cost and availability, it seems that date-palm wastes can be replaced with cocopeat media for gerbera.

Keywords:Date-palm waste, Substrate, Gerbera

References

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