

Mulch effect on the characteristics of the Lays Cucumber (*Cucumis sativus*) Greenhouse in city Rudan

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ABSTRACT: To study the effect of mulches on the yield of greenhouse cucumber Ladys factorial experiment in a randomized complete block design with three replications was conducted in Mesopotamia. Treatments consisted of first factor, the (Ladys) and the second factor mulch at five levels: 1. control (no mulch) 2. 3-plastic palm leaves dark 4 white plastic 5-plastics were clear. The results showed that genotype effect leaves per plant, plant height, plant weight, yield, earliness, yield a significant difference between the performance of the entire plant. The effect of mulch on the number of leaves per plant, plant height, plant weight, yield, precocity, the average yield of a plant, number of fruits per plant and the total yield was significant. The results showed that the Ladys other than the performance of more premature and white mulches increase earliness performance, the figure Ladys and white mulch produced the highest yield.

Keywords: Cucumbers, Mulch, Early performance.

INTRODUCTION

Cucumber is one of the most important greenhouse Iran is that more than 70 percent of total production in the greenhouse include the need to reduce agricultural inputs and water use efficiency of crops Products agriculture, such as cucumbers, tomatoes and other vegetables Using mulch is of great importance. Hand because of weeds and weeding cost of using mulch is very important. It appears from a variety of plastic mulch, mulch black great impact to eliminate weeds and white plastic mulch on productivity performance is the product of many influences (Mohseni far, 2010). What is of interest to producers and consumers of cucurbits is more supply product with good quality and utility is Market In this context, an attempt to find a suitable solution in order to provide production-grade product quality, high production is needed. So that the needs of income-producing consumer demand was also held. In the current study, application and economic impact of the use of polyethylene mulch as new technologies in the production of cucumber, higher quality and quantity, is evaluated (Soleimani Pour et al., 2004). Herbaceous plants are vegetables to different parts, such as leaves, flowers, stems, roots, tubers and bulbs, flowers, fruit, seeds are dried and powdered raw and cooked, frozen or canned food for human consumption It turns out (honest, 2010). The scientific name *Cucumis sativus* L. cucumber plant Cucumis year of which 30 species have been recorded in Asia and Africa. Cucumbers grow shallow and wide. Only a limited number of root can penetrate up to a depth of 5.0 meters. Many branches around the root causes of the plant root system is shallow, at a depth of a little bit of soil (peyvast, 2006). Fresh fruit is a berry fruit in different varieties of varying length 10-8 cm. The fruit has three rooms. In the beginning was the fruit of prickly growth, but the fruit is smooth. Fresh grain weight between 20 and 30 grams. Fruit skin color from light green to dark green too will change (peyvast, 2006). Mulch or soil cover is a protective layer on the surface of the part, organic matter (wheat straw, rice husk, peat, compost, peat moss, sawdust or wood chips, pieces of paper, fertilizers, animal or plant) and indirect Organic (stones, small pieces of brick, plastic polyethylene) can be used as mulch (Jfrnya and Homaeia, 2006). The use of plastic mulch can be saved and maintain beneficial effects of water and soil aggregation and soil fertility decline and increased evaporation from the soil surface around

the plant said carbon dioxide (Farhadi, 2003). Black plastic mulches to study the effects on growth performance and Blossom End Rot watermelon varieties Charleston Gray found that the amount of mulch treatments with significant performance, most of the treatments without mulch, so that the average yield in the test plots treated with mulch 45 and 75 tonnes per hectare and treatment without mulch 25/40 per acre. The percent increase in performance compared to treatment without mulch mulch treatment, 85% (two years), respectively (kashi, et al., 203). Plastic mulch crop row covers a significant impact in increasing the temperature of the surrounding soil and yield and earliness Taliban and increased performance in the plots with plastic mulch was more than plots without mulch (Bvnanv and Lamont, 1978., Shils and Shldrak, 1995).and 73 grams per plant) (Hsndookht and Mastouri, 2006). Farias et al (1994) reported that white and black mulch function and increased fruit cucumbers compared to treatment without mulch.

MATERIALS AND METHODS

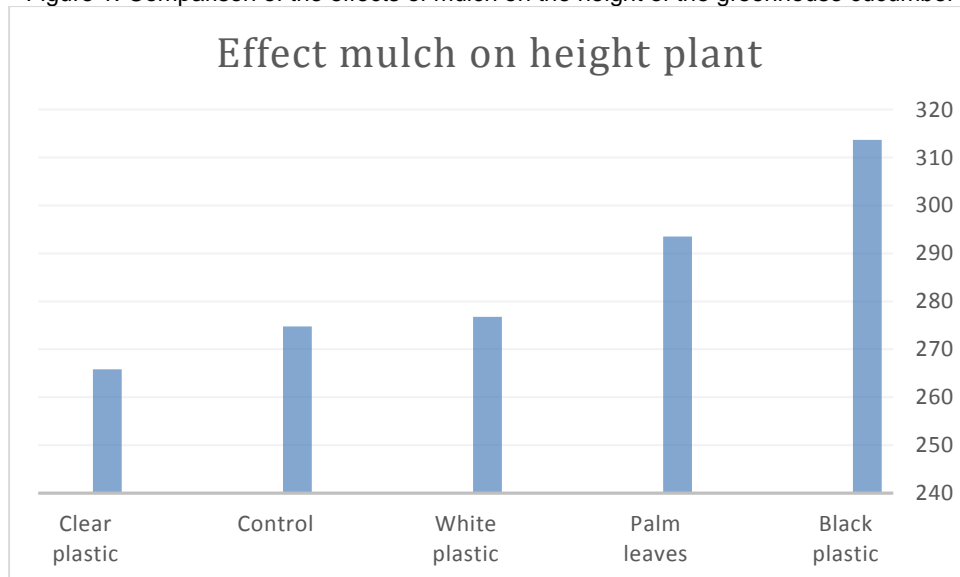
The research in Zray 2013-2012 (September to March) was conducted in the city of Mesopotamia.° East with 198 mm average annual rainfall, maximum temperature and minimum temperature of 50 ° C mean annual temperature 28.6 ° C ° C and relative humidity of 46 percent. Rainfalls in the region is often in autumn and winter and spring (weather data Rudan, 2011). Factorial experiment design was a randomized complete block with three Repeat Was .The first factor involves the cucumber (Ladys) and the second factor mulches include (1 control (no mulch) 2. 3-plastic palm leaves dark Sfyd5-plastic clear plastic 4), respectively. A total of five treatments and 15 experimental plots, respectively. 2 seeds per hill culture that emerged after the first true leaf thinning and one plant per hill kept. Watering early in the day on a daily basis, and after two or three days with the emergence of seeds were determined. But after the full deployment at intervals greater plant irrigation was done. Amounts Fertilizer nitrogen of urea fertilizer phosphorus and potassium in several stages and all that, according to soil test results had been identified and were applied before planting mixed with the soil. All care was performed crops during the growing season, the drip irrigation method. Data using SAS computer software were analyzed and compared with Duncan's multiple range test at 1/0 was the shape was drawn using Excel software.

RESULTS AND DISCUSSION

Height

Mulch effect no height plant was significant at the 1% maximum height (314 cm) with black plastic mulch and the lowest (266 cm) of clear plastic mulch treatments. The interaction between cultivars and mulch on plant height was not significant. Hanada (1991) also reported that the vegetative growth (plant height, leaf number and area) with the use of transparent and black mulch were higher than without mulch. In this study, the black mulch increased 15 percent compared to control plant height.

Figure 1. Comparison of the effects of mulch on the height of the greenhouse cucumber



Leaves

The results of the data suggests that the effect, the number of leaf mulch, respectively, at 5, 5 and 1 percent was significant and the largest number of leaves in black plastic mulch treatments were observed. White plastic mulch treatments, with no significant difference compared Ladys.

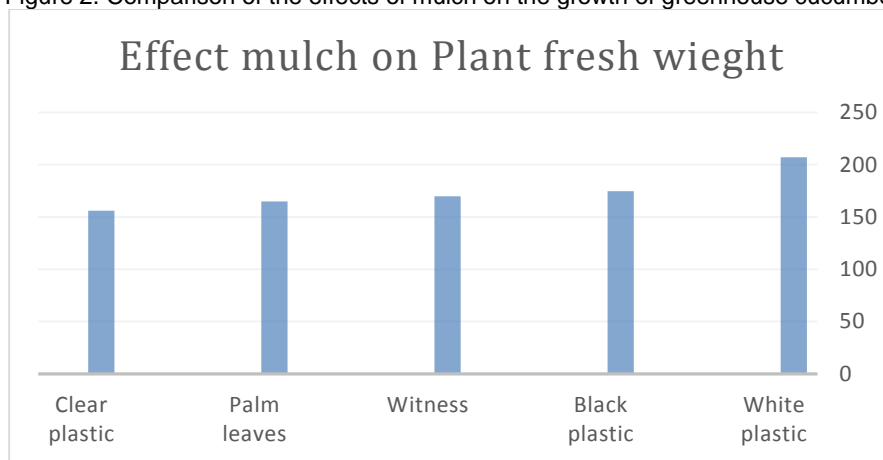
The number of fruits per plant

The results of the data suggests that the average number of fruit per plant mulch effect at 1 and 5 percent of the average number of fruits per plant was significant and the most white plastic mulch and the Ladys were in treatment.

Weight Wet Bush

Based on the results mulch effect bush was significant at 5% and the maximum amount of plant and plant weight (207 grams) of white plastic mulch and the lowest (156 g) of the mutual effect of the treatment was clear plastic and mulch the plant weight was not significant.

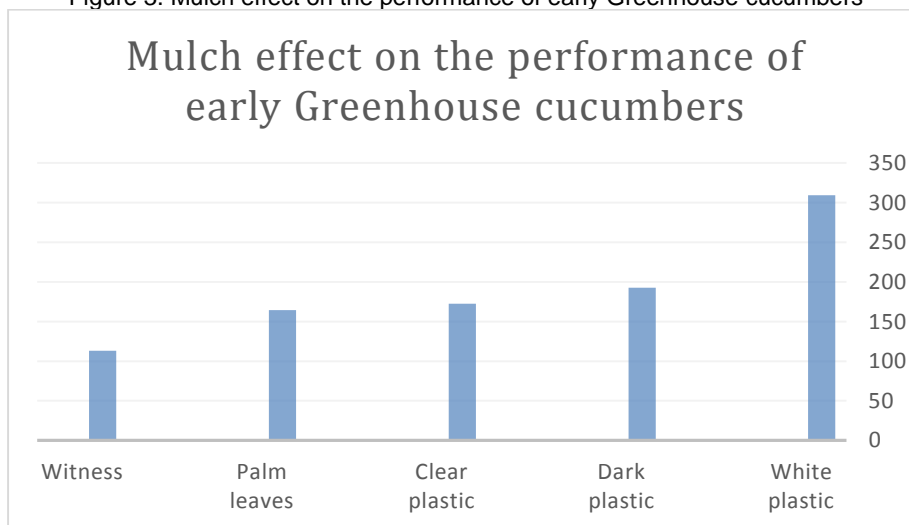
Figure 2. Comparison of the effects of mulch on the growth of greenhouse cucumber



Early performance

Based on the results mulch effect early performance at 1 Percentage Meaningful was the greatest early yield (309 g plant) belonging to the white plastic mulch and the lowest (113 g per plant) belonging to the treatments without mulch (control), respectively. 1992, Campos et al).

Figure 3. Mulch effect on the performance of early Greenhouse cucumbers



Discussion and Conclusion

The mulch is a valuable place in the world in the production of vegetable and pleasant way of mulch is used (Munguia-lopez et al, 1994). Advantages of the use of mulches, such as increased performance, maintain soil moisture, reduce the frequency of watering, especially in the early stages of planting, remove Crust breaking, preventing the accumulation of salt on the stack, reducing leaching, increased soil fertility, increase soil temperature, control weeds and production of high quality fruit, fruit avoid contact with the soil and control pests and diseases have been reported in many studies (Kromer, 1982).

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