

Climate change caused by dust and its effects on the characteristics of Morphophysiology, quantitative and qualitative yield of plants in Khuzestan province

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Abstract: Human in the last 20 years climate change has faced a lot of his works on display touches gradually. Dust (size 4 microns) resulting from natural phenomena in which these changes occur, the mitigation of harmful effects is very difficult and almost "out of control And why is Iran being on the belt of this phenomenon (geographical location and latitude 24 40 °) regions of the country constantly, especially "the South have faced with this phenomenon but in recent years the amount, concentration of suspended solids, number, time stability and the establishment, expansion and influence of this phenomenon has increased. Spread and persistence of dust caused climate change in terms of amount of light received, changes in air temperature and relative humidity changes in the These changes on plant metabolism and affects the .amounts directly and carbon dioxide and oxygen is indirectly Dust particles are .performance characteristics of qualitative and quantitative Morphophysiology and affect the plants no moisture absorption and potential abundance of water that attracts humidity and dry air over the process of Dusts on plant surfaces are green and the moisture levels, reduced .expanding leaf surfaces and limit plant growth On the other hand placing the green plants on the surface, .water pressure are limited turgid growth will intensify disrupting the process of receiving light and can reduce plant photosynthesis and are dark spots on plants and garden With low growth, reduced plant height and dry matter .products to create a market-friendly to reduce the intensity accumulation, especially "in plants such as sorghum and alfalfa hay spatial and reduced product sweep sorghum According to estimates made .south province reduced panicle length, have a severe drop Radashth product phenomenon to about 40 to 50 percent crop damage are: for example, "reduce product pomegranates from 6 tons to two tons and reduce product from 50 to 60 pounds below the five kilogram PJ per tree in 2009 resulting this is a phenomenon. Because of the dust early harvested crops such as pomegranates reduce serious product and its quality Dust phenomena addition to .is low. The amount of the paste processing and production quality is very low reducing the impact of harvesting dates is seriously diminish the quality of this product is too. At present rates of harvest dates in Khorramshahr is faced with a significant decrease. In 2009 only six thousand and 500 tons of palm groves of palm harvest and harvest dates grade level to zero level and harvest dates Palm owners only grade 2 and below have hope. Dust phenomena in addition to increasing sequence s pests, reducing rates of photosynthesis and .quality Field dates will be

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1. Introduction

Source of suspended particles of dust which is known as the Saudi desert, North Africa due to changes in water regime due to dam by Turkey, Syria, Iraq and Iran on the branches of the Tigris and Euphrates is. Also, the water transfer to the center of Iraq's Tigris and seasonal shortages of rainfall and drought some swamp areas and destroy vegetation exacerbate this phenomenon and new sources of dust in the West region of Iraq, Syria, Jordan and northern Saudi Arabia

offers. This should be as dust and pollution resulting from its recent low of 20 percent domestic origin is undesirable due to the use of water resources and drought is in the deserts of Khuzestan. Combination of physical and chemical analysis of dust in the atmosphere and other provinces of Khuzestan shows the dust consists of grains of sand are not merely, but a complex combination of chemical elements are. Elements in the dust composition of sodium, silica, carbon, calcium, potassium and some other elements in

soil organic matter and metals also exist, in July last year in Khuzestan province dust concentrations exceeding 840 micrograms per thousand cubic meters this rate was seven times standard.

Zrasvndy and Mokhtari (2009), referring to the year end from October 86 to 31 cases with mean dust phenomenon lasting 46 hours had occurred in Khuzestan, while the beginning of the year so far seen 22 cases of Khuzestan dust phenomena Mean survival was 60 hours, despite the chemical pollutants, microbial and radioactive, has stressed: Unfortunately our results Reviews on large samples of dust and soils in the city of Ahvaz near the border with Iraq and Iran confirm this. For example, the amount of elements like uranium, thorium, arsenic, lead, zinc, nickel and cobalt samples in little more than normal amounts of it. Samples tested in the third period and the amount of maximum visibility of the direct relationships between particle size and the distance over by them are; apparatus ICP-MS analysis have been given the frequent use of weapons of biological, chemical by Saddam's regime and use America's Depleted Uranium, the existence of pollution on great surprise. Another point to be noted that this type of soil and dust more than two types of clay and silt (quartz) is. Lighter clay and dust from the long distance makes it. Dust in remote areas of Khuzestan, which is seen more of this type. Due to high clay ability to absorb organic and inorganic chemicals, fine texture and the risks much more than this type of soil silt soil (quartz) grains that have large adsorption capability is less. On the other hand there in these studies high levels of bacteria and pollen have also been reported. Although the amount of nuclear, chemical and microbial contamination in dust is low but because the provinces are exposed to this pollution (Khuzestan, Fars, Boushehr and Isfahan, Lorestan) Supplier Home and garden crops also can minimal pollution entering food chain, huge risks for the health of the entire nation to create.

2. Results and discussion

Iran produces many agricultural products, especially garden products with comparative advantages and sometimes absolute, and numerous opportunities this feature has provided. Southern provinces of the country due to special climatic conditions it contains large groves, which caused side industries and become dependent on dates be formed in these provinces and agricultural economy of these areas, particularly city of Khorramshahr, Abadan, Shadegan and times productions palm side is the main

focus. But in recent years and following the climate change in these areas, water resources province and severely damaged the emerging phenomenon of static dust on the line and cause extensive groves of these areas the greatest loss of surface water invade the soil has undergone. Maher news agency reported deaths in the south as "South Palm die standing" writes: Palm southern Khuzestan all Iranian people and lush palm-resistant know, but this year's Palm owners in these areas due to salinity and "Palm" phenomena of drought and dust, with more than 50 percent reduction in the production of Palm and dates have been encountered. More, the report: In eight years war, many of the palm in these areas due to the Collections at the center of war and where military operations sides severely destroyed and damages were in some statistics announced that about 70 percent of Palm in the war and the effects Next caused it disappeared. However, action planning and paying for replacement planting of appropriate incentives to prevent the government from reducing the number did not receive palms. In the interim, Abadan and Khorramshahr cities due to palm abundance, despite the loss of countless trees during the war also produced Bellwether Palm and dates were in the country, but this year's excessive water salinity ""Palm" " about 90 percent water groves of these areas through streams radiating from its supplies, production Palm, and dates in the city of Abadan, Khorramshahr, Arvndknar and Mino Island with the loss of at least 50 percent has encountered.

Falling ratings in 2008, 38 countries in the world palm production advantages were a total of 6 million and 422 thousand tons of dates were produced in the world. Of these countries, five countries index, ranking the production of the palm of your had and thus Egypt produced one million and 130 thousand tons in the first rank, Iran producing one million tons per second, Saudi Arabia produces 970 thousand tons in third countries UAE and Pakistan, respectively, producing 755 thousand tons and 510 tons, ranking fourth and fifth production date stood. But now Iran's second position was unstable and produced a sharp decline in Iran last year or two notable advantage is lost and this concern by saying, "Mousavi Sydmjyd" province chief of Agriculture is obvious: this year Update two phenomena of drought and dust in the province in addition to reduced production of some dates, reducing the quality of this product have also associated. He adds: Last year (2006) over 160 tons of dates were produced in Khuzestan that amount this year reaches 110 thousand tons and 50 tons will be reduced along. In some areas such as staff, and the purchase price Shadegan dates due to poor quality products has decreased. Head of Agricultural Jihad Organization and Kohnuj Jiroft also reduce production 20 percent this year dates have expressed concern:

According to the forecast production rate in the region dates due to complications dates cluster is about 20 percent.

Pour Rokni (2009) Director of Agriculture Khorramshahr groves destroyed the false news knows, but reducing quality and quantity is confirmed dates: This year we produced 30 percent reduction and dust in addition to lower harvest dates, The impact on product quality and production this year has had a degree of dates and harvest will not second-class and mostly lower. He promoted the planting of grapes in Khorramshahr as robust and fruitful tree beside the palm trees and sent says: several thousand cuttings of the variety of grapes known to have distributed among farmers to help farmers, which is less than the damage caused by the loss of production dates to see the damage. Pour Idris (2009) Director of Agriculture also 50 percent reduction in Abadan harvest dates compared to last year's crop does and says: Last year, the Palm Groves of Abadan and Kharg Arvndknar about 60 thousand tons, Rtb and harvest dates, but this year We anticipate that this amounts to 30 thousand tons. His rising water EC (salinity) Bhmshyr island main reason for the drop in quality and quantity of palm knows Abadan and adds: groves of our grade 2 and 3 are

produced in ha about 3 tons and this figure is very low. "Idris pour" insurance plan free two million 700 thousand palm trees and it also says the government in support of Palm owners knows. Sami (2009) confirmed the managers said Agriculture Khorramshahr and Abadan says: Studies indicate that the dust this year and young groves irrigated with fresh water "Palm" planting in two or three years greatly increased the salinity cause of death of young palms has been the addition to seasonal storms and transient in Khuzestan occurs in young palm from being dug and removed it from the production cycle is effective. However, it seems disregarding the effects contaminating water sources and disregard province dust phenomenon in the province now, gradually and shows his palm proud of this territory has humiliated the Islamic homeland.

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